EICO 625
Tube TESTER

New Tube Tester Data

EICO Model 625

Radio And Television News - May, 1956

Tube	Shunt	Filament	Selector	Up	Down
3BZ6	22	3.3	2	1, 5, 6	2, 3,7
5BE8	23	5.0	2	1, 2	3, 4
"	23	5.0	2	6, 7, 9	4, 8
6AZ8	21	6.3	2	1, 6	2, 3, 5
"	16	6.3	1	8, 9	5, 7
6BA8	26	6.3	2	2, 3	1, 4
"	24	6.3	2	7, 8	4, 6
6BC8	20	6.3	2	1, 2	3, 4
"	20	6.3	2	6, 7	4, 8
6BE8	23	6.3	2	1, 2	3, 4
"	23	6.3	2	6, 7, 9	4, 8
6BH8	24	6.3	2	2, 3	1, 4
"	24	6.3	2	7, 8, 9	4, 6
6BZ6	22	6.3	2	1, 5, 6	2, 3, 7
6CB5	20	6.3	3	1, 4, 5, 8, 10	2, 3, 6
6CG7	16	6.3	1	1, 2	3, 4
"	16	6.3	1	6, 7	4, 8
6CM7	100	6.3	1	1, 2	3, 4
"	22	6.3	1	6, 7	4, 8
6CN7*	29	3.3	3	7, 8	4, 5, 6
"	14	3.3	1	2	3, 4, 5
"	14	3.3	1	1	3, 4, 5
6CS7	25	6.3	2	1, 3	4, 9
"	28	6.3	2	6, 7	4, 8
6DE6	20	6.3	2	1, 5, 6	2, 3, 7
12BV7*	35	6.3	3	7, 8	1, 3, 4, 5, 9
12C5	19	12.6	3	2, 5, 6, 7	1, 3
19AU4	25	12.6	2	5	3, 7
EF86/Z-729	26	6.3	2	1, 6, 9	3, 4, 8

*Revised Data

EICO TUBE TESTER MODEL 625

CONSTRUCTION BOOK

GENERAL

A tube tester (e.g. EICO Model 625) is a necessary and essential instrument. It is veritably indispensable in the servicing of modern receivers, television, etc.

For rapid reference and easy use, the EICO 625 Tube Tester has a "speed-roll chart" and numbered lever switches that connect to each tube pin individually. For that reason special care and much preparation by our engineering department was required prior to announcing an instrument of this type. Years of EICO "know-how" in instrument and kit design enabled us to reduce and simplify the mechanical construction of this device without relinquishing in any way the necessary and desirable design features. Although at first glance the tube tester seems like a formidable device to construct and wire, it develops into a relatively simple affair when our carefully prepared instructions are followed. As an example, in the tube wiring, all pins #1 are connected together, then all pins #2, etc. After the various sockets are completed, the remaining wiring is minor.

CONSTRUCTION

Before starting the actual construction, study the schematic and pictorial wiring thoroughly, getting all of the steps clear in your mind. Do not rush the assembly. Care will pay dividends. It is suggested, because of stray pickup, leads improperly run, etc., that you place your wiring exactly as shown on diagrams.

NOTE: Use a good grade of rosin core solder. Under no circumstances use acid core solder or acid flux, inasmuch as this can cause serious corrosion. Before soldering, make certain there is a good mechanical connection. The solder must flow before you remove the soldering iron. This will prevent rosin joints which are poor electrical conductors. If you are soldering close to a part, hold the ends of a pair of longnose pliers between the part and solder joint. The pliers will conduct the heat away and prevent the component from being unduly overheated.

Carefully unwrap all the parts and check them in the space provided on the parts list. Note; In order to insure the supply of kits and prompt delivery, we are forced to order from several sources. The standard manufacturers' values are interchangeable, etc. You may find, therefore, that a value may vary within the permissible circuit tolerance: e.g., a resistance of 470,000 ohms may be substituted for, or may measure 510,000 ohms, etc. All parts supplied will work just as well as the part for which it was substituted. Most parts have a tolerance rating of 5 to 20% and the circuit is designed to take these variations into account.

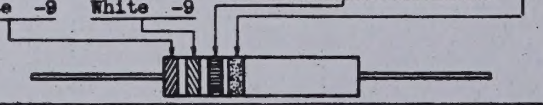
PARTS LIST - MODEL 625K - TUBE TESTER

Chk	Part No.	Symbol	Description	Amount
	1	B1,B2	Pilot Light #47	2
	2	B3	Overload Bulb #42	1
	3	B4	Short Indicator NE-51	1
	4	C1	.01 mfd. Condenser 400V	1
	5	H1	Panel	1
	6	H2	Sub-chassis	1
	7	H3	Screw Socket	1
	8	H4	Bayonet Socket	3
	9	H5	4 pin Socket (lge) and Retainer Ring	1
	10	H6	5 pin Socket and RR	1
	11	H7	5 pin Socket (Hytron) and RR	1
	12	H8	6 pin Socket and RR	1
	13	H9	7 pin Socket (large) and RR	1
	14	H10	7 pin Socket (miniature) and RR	1
	15	H11	8 pin Socket (Wafer) Riveted	1
	16	H12	8 pin Socket (octal) and RR	1
	17	H13	8 pin Socket (loctal) and RR	1
	18	H14	9 pin Socket and RR	1
	19	H15	Blank Socket and RR	1
	20	H16	Pointer Knobs	4
	21	H17	Rubber Grommets ¼"	2
	22	H18	Rubber Grommets ½"	3
	23	H19	Rubber Grommets 5/8" Roll Chart	2
	24	H20	6/32 Nuts	6
	25	H21	6/32 x 1/4 Bolts	8
	26	H22	6/32 Self Tapping	8
	27	H23	Wire (roll)	1
	28	H24	Wire-kinkless (roll)	1
	29	H25	Wire-bare (roll)	1
	30	H26	Meter lugs	2
	31	H27	10/32 Meter Nuts	2
	32	H28	#6 Lockwasher	6
	33	H29	Cabinet	1
	34	H30	Handle	1
	35	H31	Line Cord	1
	36	H32	Grid Caps	2
	37	H33	3/8 Lockwasher	4
	38	H34	Scotch Tape	1
	39	H35	3/8 Nuts	4
	40	H36	3/8 Panel Washers	4
	41	H37	7/16 Ring Nuts	3
	42	H38	Celluloid Screen	1
	43	H39	Roll Chart Assembly	1
	44	H40	Lever Switch Knobs	10
	45	H41	Meter Washers	2
	46	H42	Wire- Spaghetti. 6 inches	1
	47	M1	0-1 Ma. Meter Movement	1
	48	P1	Line Adjust Pot. 100-250 ohm	1
	49	P2	Shunt Control 200 ohm	1
	50	PT1	Power transformer	1
	51	R1	2500 ohm 5W Resis	1
	52	R2	4700 " 1W "	1
	53	R3	820 " 1W "	1
	54	R4	1600 " 1W "	1
	55	R5	510 " ½W "	1
	56	R6	95K " 1W "	1
	57	R7	500K " ½W "	1
	58	R8	3-5 " 1W "	1
	59	S1-S10	Single Pole 3 position Lever Switches	10
	60	S11	SPDT Push Button	1
	61	S12	SP 15 position Filament Switch	1
	62	S13	DP 5 position Selector Switch	1
	63	S14	SPST On-Off Switch	1
	64	V1	6H6 Tube	1

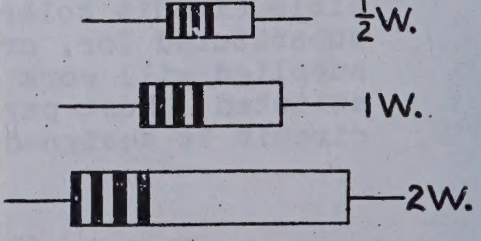
RMA COLOR CODES

R.M.A. RESISTOR COLOR CODE

Black -0	Black -0	Black -	TOLERANCE
Brown -1	Brown -1	Brown -0	Gold =± 5%
Red -2	Red -2	Red -00	Silver =±10%
Orange -3	Orange -3	Orange -000	No band=±20%
Yellow -4	Yellow -4	Yellow -0000	
Green -5	Green -5	Green -00000	
Blue -6	Blue -6	Blue -000000	
Violet -7	Violet -7	Gold -Multiply by .1	
Gray -8	Gray -8	Silver -Multiply by .01	
White -9	White -9		



WATTAGE SIZES



A higher wattage resistor can always be substituted for a smaller size

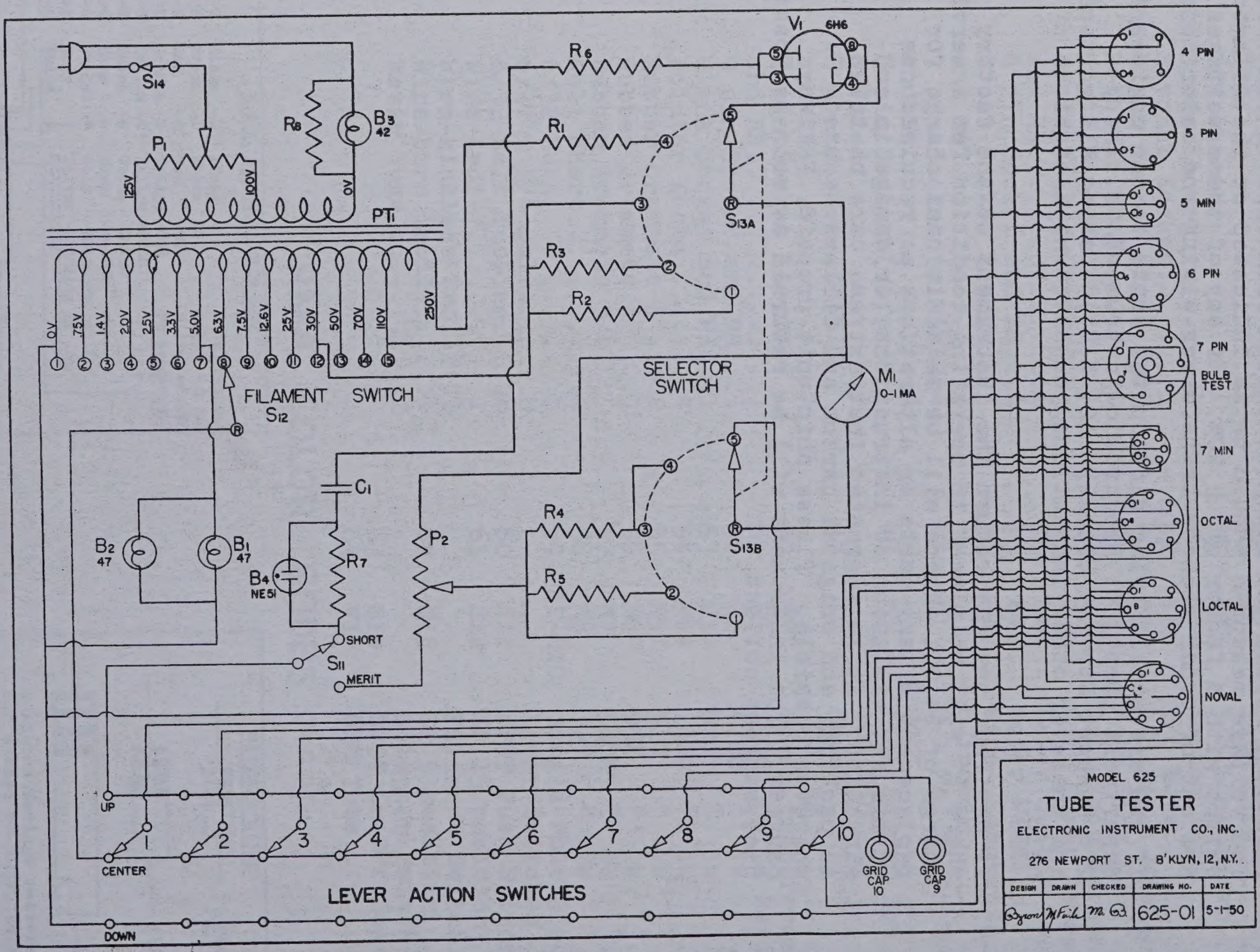
SERVICING NOTES

1. Check wiring procedure carefully. Nearly all cases of trouble in the past have improper wiring as their source.

2. Check transformer voltages as follows: (a) Adjust "Line Adjust" potentiometer. (b) Connect an A.C. voltmeter across both grid caps. With all lever switches in the "center" position, except #10 which should be in the "Down" position, rotate the filament switch from zero to 110 volts. The voltage measured should be as indicated on the filament switch with a factor of ± 20%. If any of these voltages are out of order recheck transformer wiring and color code.

3. If you are still having difficulty, write to our engineering department (Dept. T, Electronic Instrument Co.,Inc., 276 Newport Street, Brooklyn 12, N.Y.) listing all voltages and whatever other indications you have which might be of help.

4. If desired, you may return the instrument to the factory where it will be placed in operating condition for a service charge of $4.00. There will be an additional charge for replacement of any parts or alterations as required due to misuse, violation of instructions, or damage in construction. It is suggested that extreme care be taken in packing, and original carton and fillers be used wherever possible. Please ship unit prepaid, Railway Express. The instrument will be returned as soon as possible, express collect.



MODEL 625

TUBE TESTER

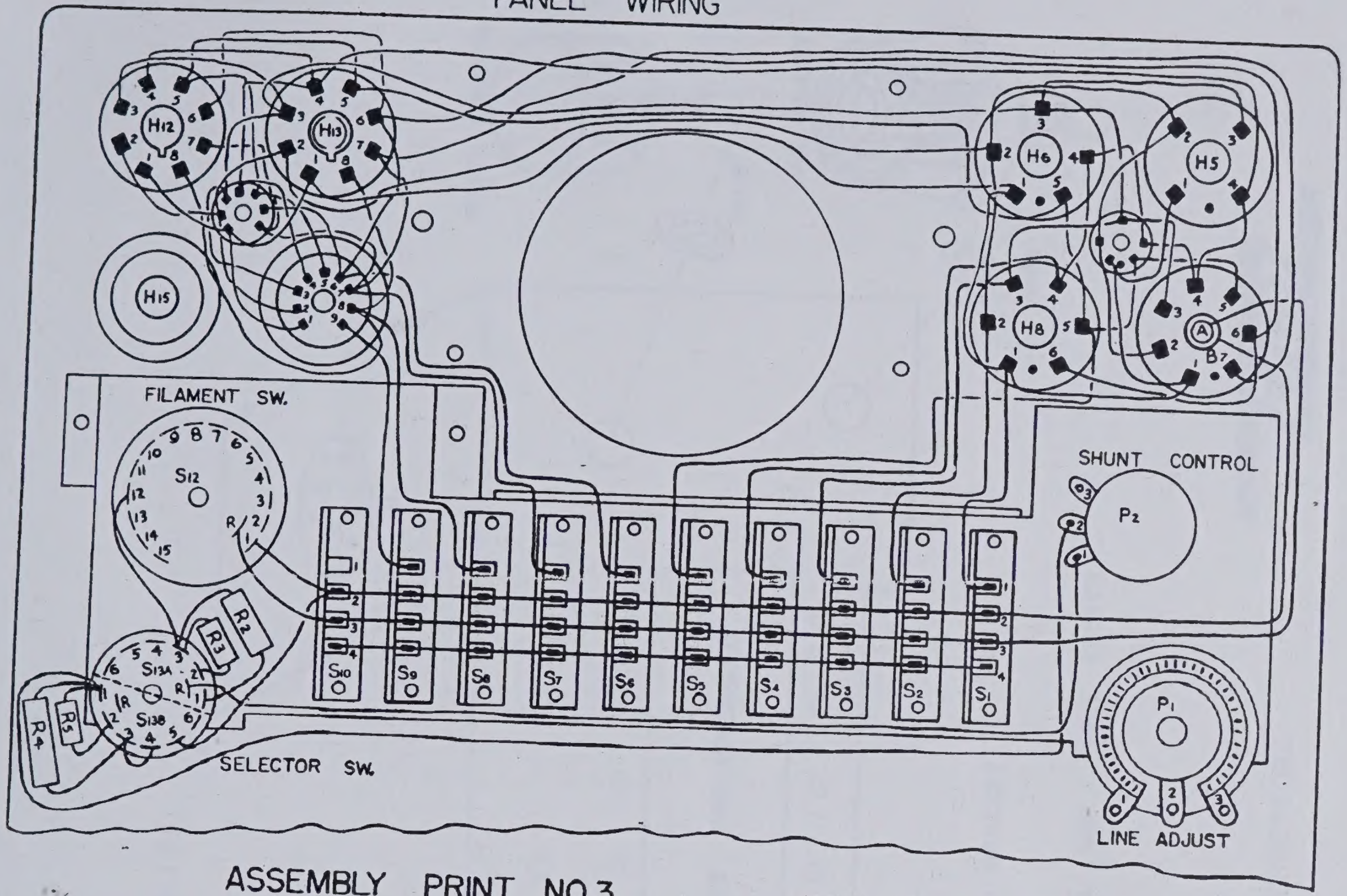
ELECTRONIC INSTRUMENT CO., INC.

276 NEWPORT ST. B'KLYN, 12, N.Y.

DESIGN	DRAWN	CHECKED	DRAWING NO.	DATE
		M. G.	625-01	5-1-50

PART #	SYMBOL	SPECIFICATION
1	B1	#47 PILOT LIGHT
1	B2	#47 PILOT LIGHT
2	B3	#42 OVERLOAD
3	B4	NE-51 SHORT IND.
4	C1	.01 MFD COND.
47	M1	0-1 MA METER
48	P1	100-200 OHM 25W. POT.
49	P2	200 OHM POT.
51	R1	2500 OHM 5W RES.
52	R2	4700 OHM 5% RES.
53	R3	820 OHM 5% RES.
54	R4	1600 OHM 5% RES.
55	R5	510 OHM 5% RES.
56	R6	95K OHM 1% RES.
57	R7	500K OHM RES.
58	R8	3-5 OHM RES.
59	S1-S10	SPTT LEVER ACTION
60	S11	SPDT PUSH BUTTON
61	S12	SP 15 POS. FIL. SW.
62	S13	DP 5 POS. SEL. SW.
63	S14	SPST ON-OFF SW.
64	V1	6H6 TUBE

PANEL WIRING



ASSEMBLY PRINT NO.3

MODEL 625 TUBE TESTER

PANEL WIRING

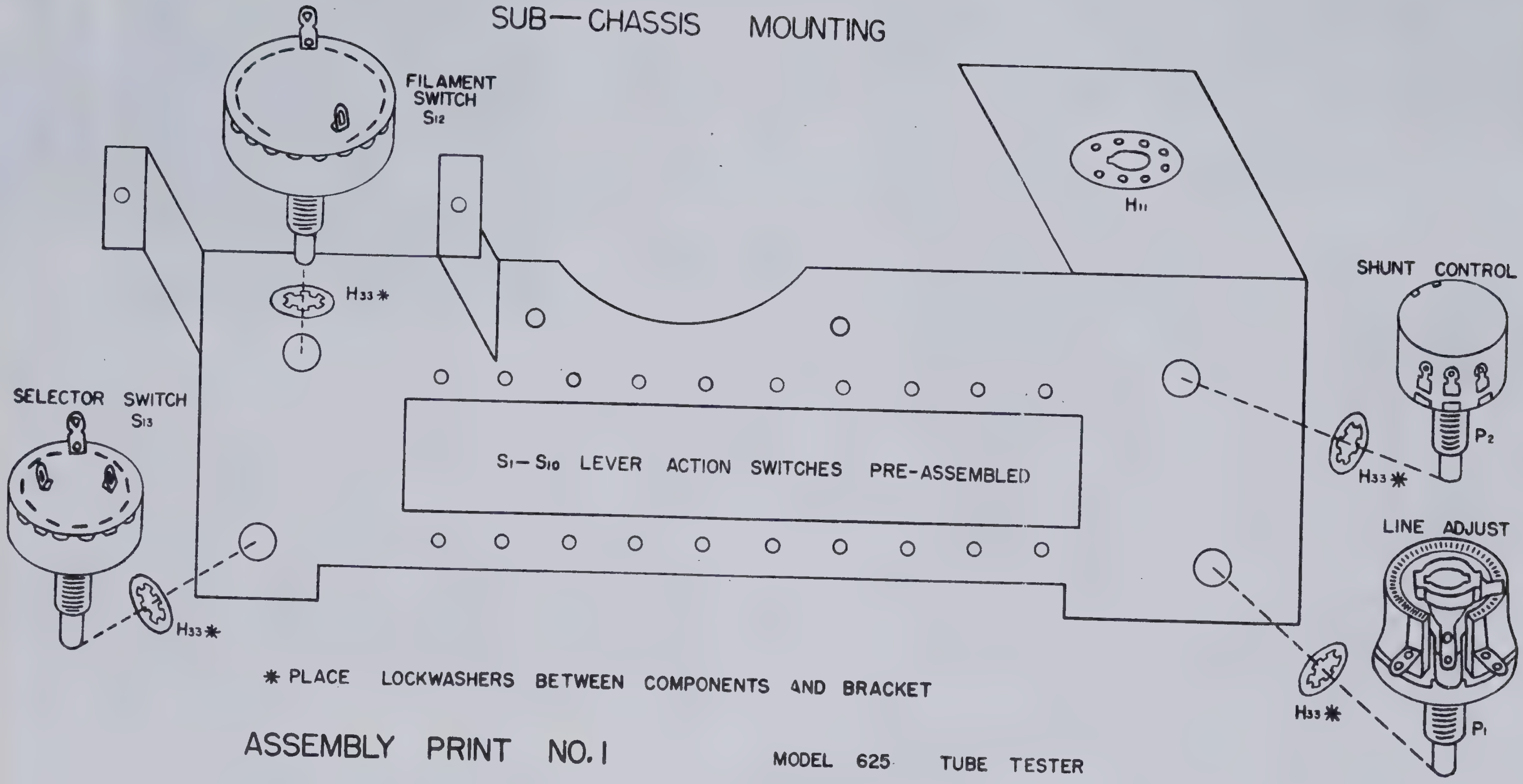
Chk	Sym.	Descrip.	From	To	Remarks
	H23	Wire	(S)H5#1	H7#1(C)	
	"	"	(S)H7#1	H9#1(C)	
	"	"	(S)H9#1	H8#1(C)	
	"	"	(C)H8#1	S1#1(S)	
	"	"	(S)H8#1	H6#1(C)	
	"	"	(S)H6#1	H13#1(C)	
	"	"	(S)H13#1	H10#1(C)	
	"	"	(C)H10#1	H12#1(S)	
	"	"	(S)H10#1	H14#1(S)	
	"	"	(S)H9#2	H7#2(C)	
	"	"	(S)H7#2	H5#2(C)	
	"	"	(S)H5#2	H6#2(C)	
	"	"	(C)H6#2	H8#2(C)	
	"	"	(S)H8#2	S2#1(S)	
	"	"	(S)H6#2	H13#2(C)	
	"	"	(S)H13#2	H10#2(C)	
	"	"	(C)H10#2	H12#2(S)	
	"	"	(S)H10#2	H14#2(S)	
	"	"	(S)H5#3	H6#3(C)	
	"	"	(C)H6#3	H7#3(C)	
	"	"	(C)H7#3	H9#3(S)	
	"	"	(S)H7#3	H8#3(C)	
	"	"	(S)H8#3	S3#1(S)	
	"	"	(S)H6#3	H13#3(C)	
	"	"	(C)H13#3	H12#3(S)	
	"	"	(S)H13#3	H10#3(C)	
	"	"	(S)H10#3	H14#3(S)	
	"	"	(C)H5#4	H9#4(C)	
	"	"	(S)H9#4	H7#4(C)	
	"	"	(S)H7#4	H6#4(C)	
	"	"	(S)H6#4	H8#4(C)	
	"	"	(S)H8#4	S4#1(S)	
	"	"	(S)H5#4	H13#4(C)	
	"	"	(C)H13#4	H12#4(S)	
	"	"	(S)H13#4	H10#4(C)	
	"	"	(S)H10#4	H14#4(S)	

PANEL WIRING

Chk	Sym.	Description	From	To	Remarks
	H23	Wire	(S)H9#5	H7#5(C)	
	"	"	(S)H7#5	H8#5(C)	
	"	"	(C)H8#5	S5#1(S)	
	"	"	(S)H8#5	H6#5(C)	
	"	"	(S)H6#5	H13#5(C)	
	"	"	(S)H13#5	H12#5(C)	
	"	"	(S)H12#5	H10#5(C)	
	"	"	(S)H10#5	H14#5(S)	
	"	"	(S)H8#6	H9#6(C)	
	"	"	(S)H9#6	H13#6(C)	
	"	"	(C)H13#6	H12#6(S)	
	"	"	(S)H13#6	H14#6(C)	
	"	"	(C)H14#6	H10#6(S)	
	"	"	(S)H14#6	S6#1(S)	
	"	"	(S)H9#7	H13#7(C)	
	"	"	(S)H13#7	H14#7(C)	
	"	"	(C)H14#7	H10#7(C)	
	"	"	(S)H10#7	H12#7(S)	
	"	"	(S)H14#7	S7#1(S)	
	"	"	(S)H13#8	H14#8(C)	
	"	"	(C)H14#8	H12#8(S)	
	"	"	(S)H14#8	S8#1(S)	
	"	"	(S)H14#9	S9#1(C)	
	"	"	(S)P2#2	S13B#1(C)	
	R4	1600 Res.	(C)S13B1	S13B#3(C)	
	H25	Bare Wire	(S)S13B#3	S13B#4(S)	
	R5	510 Res.	(S)S13B#1	S13B#2(S)	
	H23	Wire	(C)S12#12	S13A#3(C)	
	R2	4700	(C)S13A#3	S13A#1(S)	
	R3	820	(S)S13A#3	S13A#2(S)	
	H23	Wire	(S)S13AR	P2#1(C)	
	"	"	(S)S13B#5	S10#2(C)	
	"	"	(C)S10#2	S12#1(C)	
	"	"	(S)S12#R	S10#3(C)	
	"	"	(C)S1#2	H9#B(S)	
	"	"	(C)S1#3	H9#A(S)	
	H25	Bare	S1#2	S10#2	thru all #2 from S1-S10
			S1#3	S10#3	" #3 "
			S1#4	S10#4	" #4 "

EICO

SUB—CHASSIS MOUNTING



* PLACE LOCKWASHERS BETWEEN COMPONENTS AND BRACKET

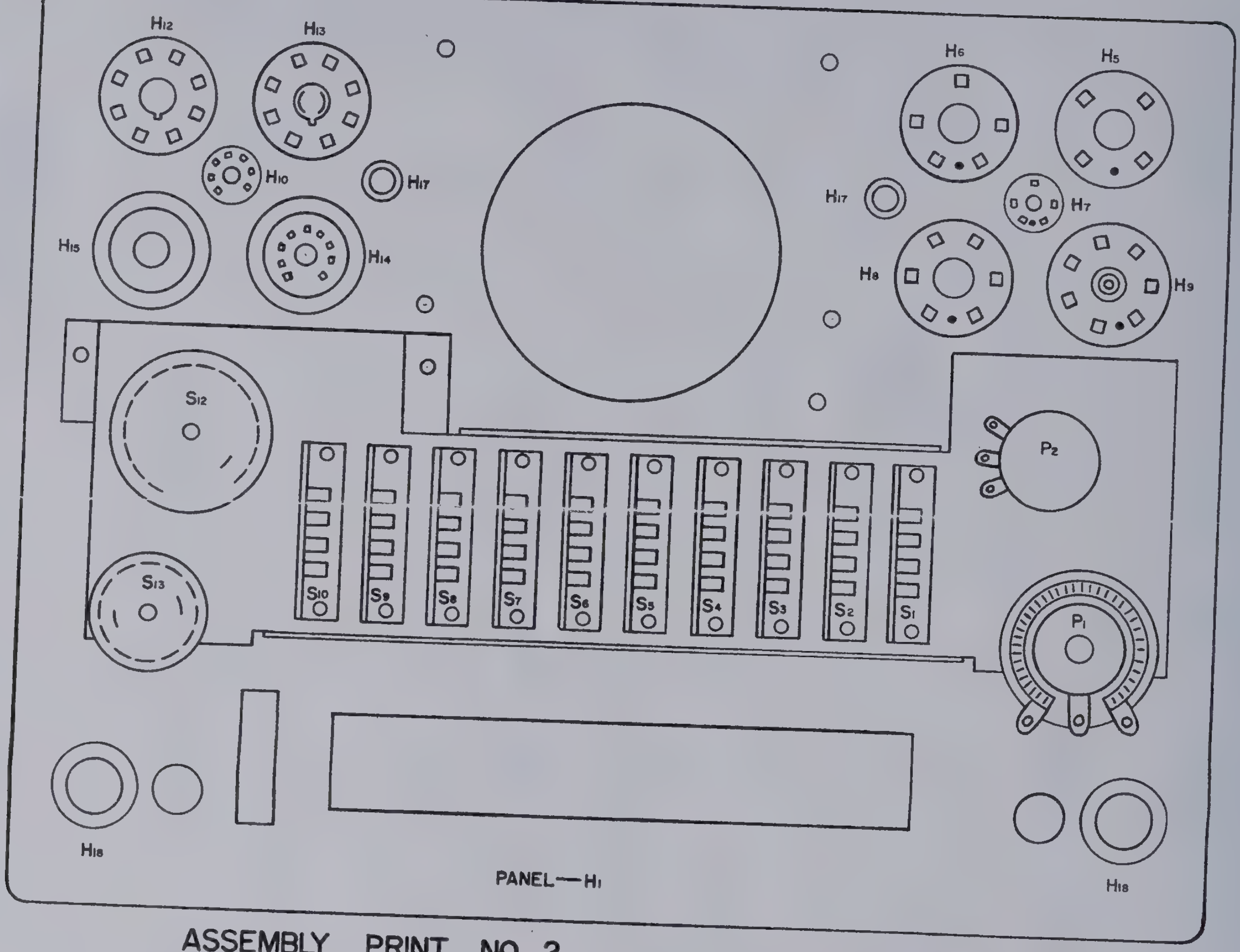
ASSEMBLY PRINT NO. 1

MODEL 625 TUBE TESTER

PLEASE SEE FOLLOWING PAGE FOR INSTRUCTIONS

EICO

PANEL MOUNTING



ASSEMBLY PRINT NO. 2

MODEL 625 TUBE TESTER

PANEL MOUNTING

(1) Insert the large seven prong socket (H9) through the front of the panel. (Orient pins exactly as shown on Assembly Print #2).

(2) Select proper retaining ring (circular wavy strip of spring steel).

(3) Following photograph, insert one end of retaining ring into socket groove and, while holding with one finger, work remaining portion around socket with a screw driver.

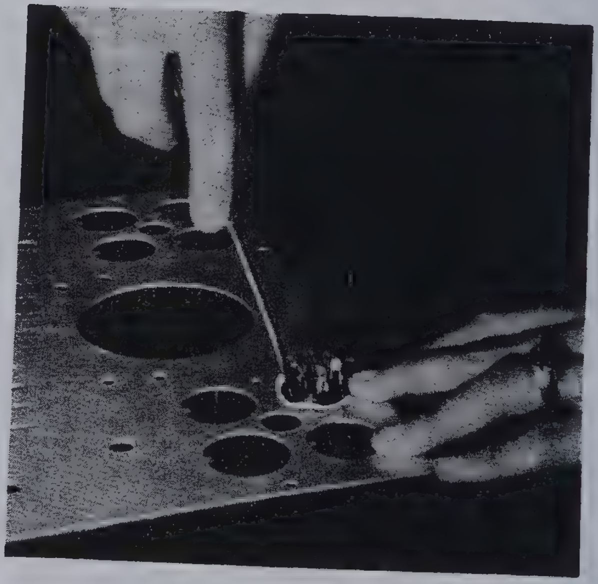
(4) Repeat steps 1, 2 and 3 for sockets H5, H6, H8, H12, H13, H14 and H15.

(5) Mount two retaining small sockets, H7 and H10, with small star retaining rings. The rings are simply pressed into place.

(6) Mount the two smaller grommets, H17, and the 2 larger grommets, H18, into proper holes on panel. Although these may seem too large, they may be inserted by using a blunt screwdriver and a slight pressure.

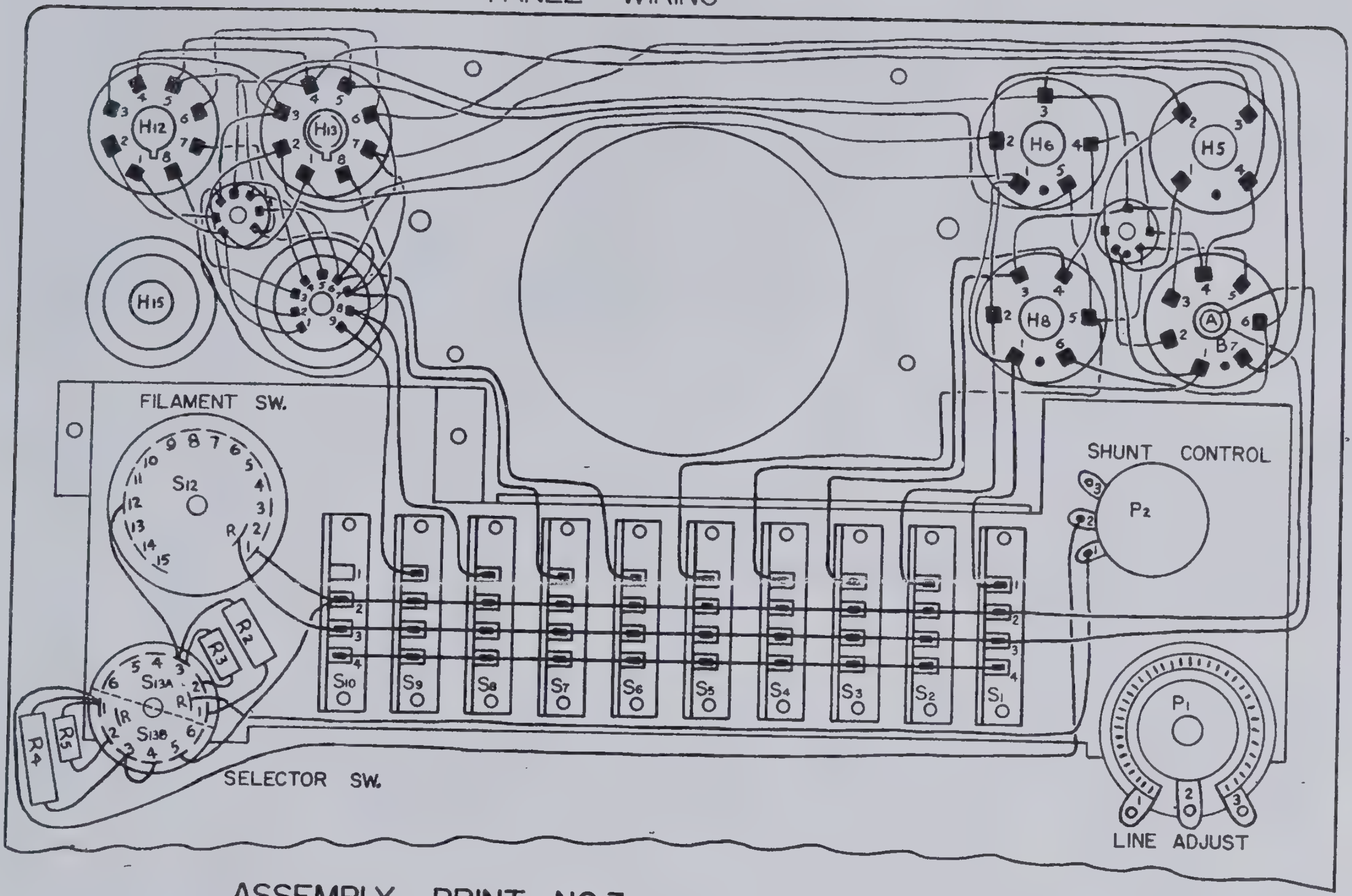
(7) Referring to Assembly Print #1, place subchassis over panel and insert ten lever switch arms through rectangular slots on panel. Mount P1, P2, S12 and S13 using lockwashers, H33 and panel washers, H36. Secure with 3/8 inch nuts, H35. Note: Lockwashers, H33, mount between potentiometers and subchassis. This also applies to the switches. Do not insert any hardware between subchassis and panel. Panel washers are placed on the panel side directly under the 3/8 inch nuts to prevent marring of the panel.

(8) In the following instructions the letter (S) means "solder" and the letter (C) means "connect". As an example consider the first line of instructions on the following page: A piece of wire (H23) is "soldered" on pin #1 of the 4 pin socket, (H5), and then "connected to pin #1 of the small 5 pin socket, H7. Note: It is not soldered on the connected side since another piece of wire will be attached there. When a step is completed, place a small mark in the Chk (Check) column.



EICO

PANEL WIRING



ASSEMBLY PRINT NO.3

MODEL 625 TUBE TESTER

PANEL WIRING

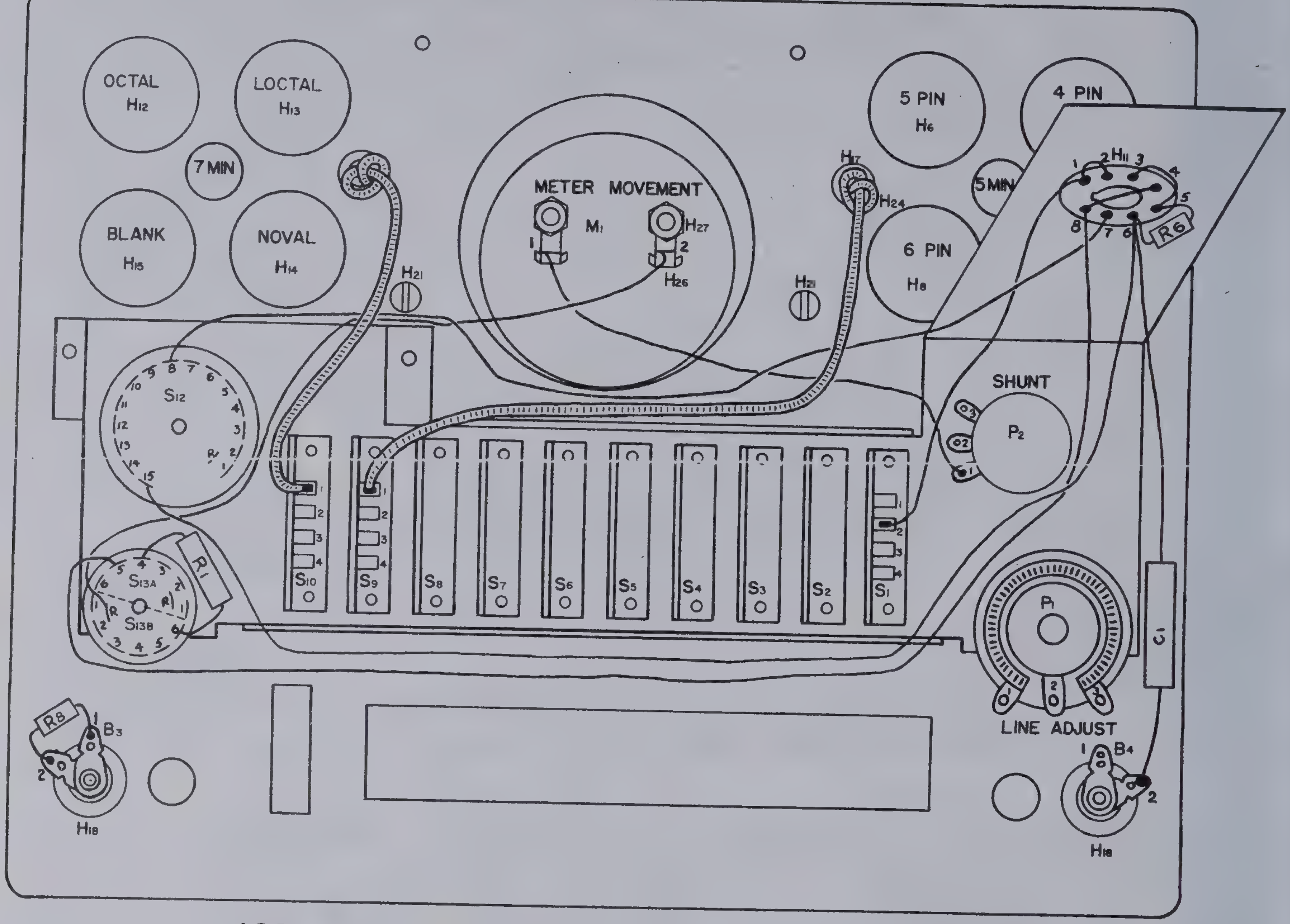
Chk	Sym.	Descrip.	From	To	Remarks
	H23	Wire	(S)H5#1	H7#1(C)	
	"	"	(S)H7#1	H9#1(C)	
	"	"	(S)H9#1	H8#1(C)	
	"	"	(C)H8#1	S1#1(S)	
	"	"	(S)H8#1	H6#1(C)	
	"	"	(S)H6#1	H13#1(C)	
	"	"	(S)H13#1	H10#1(C)	
	"	"	(C)H10#1	H12#1(S)	
	"	"	(S)H10#1	H14#1(S)	
	"	"	(S)H9#2	H7#2(C)	
	"	"	(S)H7#2	H5#2(C)	
	"	"	(S)H5#2	H6#2(C)	
	"	"	(C)H6#2	H8#2(C)	
	"	"	(S)H8#2	S2#1(S)	
	"	"	(S)H6#2	H13#2(C)	
	"	"	(S)H13#2	H10#2(C)	
	"	"	(C)H10#2	H12#2(S)	
	"	"	(S)H10#2	H14#2(S)	
	"	"	(S)H5#3	H6#3(C)	
	"	"	(C)H6#3	H7#3(C)	
	"	"	(C)H7#3	H9#3(S)	
	"	"	(S)H7#3	H8#3(C)	
	"	"	(S)H8#3	S3#1(S)	
	"	"	(S)H6#3	H13#3(C)	
	"	"	(C)H13#3	H12#3(S)	
	"	"	(S)H13#3	H10#3(C)	
	"	"	(S)H10#3	H14#3(S)	
	"	"	(C)H5#4	H9#4(C)	
	"	"	(S)H9#4	H7#4(C)	
	"	"	(S)H7#4	H6#4(C)	
	"	"	(S)H6#4	H8#4(C)	
	"	"	(S)H8#4	S4#1(S)	
	"	"	(S)H5#4	H13#4(C)	
	"	"	(C)H13#4	H12#4(S)	
	"	"	(S)H13#4	H10#4(C)	
	"	"	(S)H10#4	H14#4(S)	

PANEL WIRING

Chk	Sym.	Description	From	To	Remarks
	H23	Wire	(S)H9#5	H7#5(C)	
	"	"	(S)H7#5	H8#5(C)	
	"	"	(C)H8#5	S5#1(S)	
	"	"	(S)H8#5	H6#5(C)	
	"	"	(S)H6#5	H13#5(C)	
	"	"	(S)H13#5	H12#5(C)	
	"	"	(S)H12#5	H10#5(C)	
	"	"	(S)H10#5	H14#5(S)	
	"	"	(S)H8#6	H9#6(C)	
	"	"	(S)H9#6	H13#6(C)	
	"	"	(C)H13#6	H12#6(S)	
	"	"	(S)H13#6	H14#6(C)	
	"	"	(C)H14#6	H10#6(S)	
	"	"	(S)H14#6	S6#1(S)	
	"	"	(S)H9#7	H13#7(C)	
	"	"	(S)H13#7	H14#7(C)	
	"	"	(C)H14#7	H10#7(C)	
	"	"	(S)H10#7	H12#7(S)	
	"	"	(S)H14#7	S7#1(S)	
	"	"	(S)H13#8	H14#8(C)	
	"	"	(C)H14#8	H12#8(S)	
	"	"	(S)H14#8	S8#1(S)	
	"	"	(S)H14#9	S9#1(C)	
	"	"	(S)P2#2	S13B#1(C)	
	R4	1600 Res.	(C)S13B1	S13B#3(C)	
	H25	Bare Wire	(S)S13B#3	S13B#4(S)	
	R5	510 Res.	(S)S13B#1	S13B#2(S)	
	H23	Wire	(C)S12#12	S13A#3(C)	
	R2	4700	(C)S13A#3	S13A#1(S)	
	R3	820	(S)S13A#3	S13A#2(S)	
	H23	Wire	(S)S13AR	P2#1(C)	
	"	"	(S)S13B#5	S10#2(C)	
	"	"	(C)S10#2	S12#1(C)	
	"	"	(S)S12#R	S10#3(C)	
	"	"	(C)S1#2	H9#B(S)	
	"	"	(C)S1#3	H9#A(S)	
	H25	Bare	S1#2	S10#2	thru all #2 from S1-S10
			S1#3	S10#3	" #3 "
			S1#4	S10#4	" #4 "

EICO

PANEL WIRING



ASSEMBLY PRINT NO. 4

MODEL 625 TUBE TESTER

PANEL WIRING

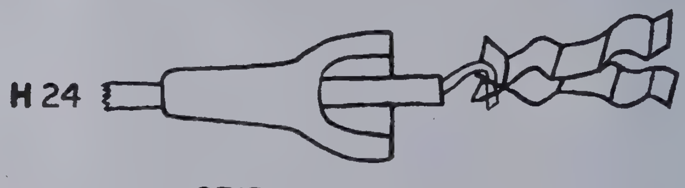
Place B3 and B4 with associated sockets into grommets as shown in insert. Make certain bulb B3 is screwed in tight.

Mount meter with 2- 6/32 bolts, H21 and 2 lockwashers, H28.

Connect meter lugs H26 to meter with nuts H27, and washers.

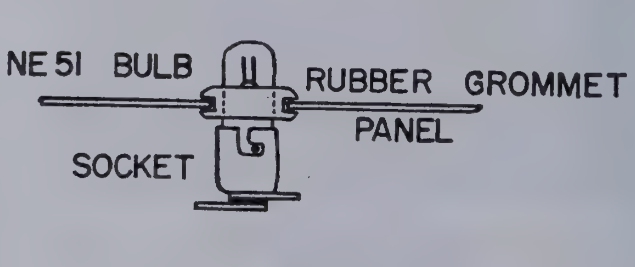
Chk.	Symbol	Description	From	To	Remarks
	H23	Wire	(C)S12#15	H11#6(C)	
	H23	Wire	(C)S12#8	H11#7(S)	
	R6	95K ohms	(C)H11#6	H11#5(C)	See Note
	H25	Bare Wire	(S)H11#5	H11#3(S)	
	H25	Bare Wire	(S)H11#2	H11#1(C)	
	H23	Wire	(S)H11#1	S1#2(S)	
	C1	.01 Mfd.	(S)H11#6	B4#2(C)	Spaghetti
	H25	Wire - Bare	(S)H11#4	H11#8(C)	
	H23	Wire	(S)H11#8	S13A#5(S)	
	R1	2500 ohms	(S)S13A#4	S13B#6(S)	
	H23	Wire	(S)S13B#R	M1#2(S)	
	H23	Wire	(S)M1#1	P2#1(S)	
	R8	3-5 Res. ohms	(C)B3#1	B3#2(C)	
	H24	Kinkless Wire	Grid Cap	S9#1(S)	Leave 12½" of wire from knot to grid cap
	"	"	Grid Cap	S10#1(S)	

NOTE: If a 1% matched pair of resistors is supplied, connect these in series and substitute for single resistor R6 as shown in diagram.

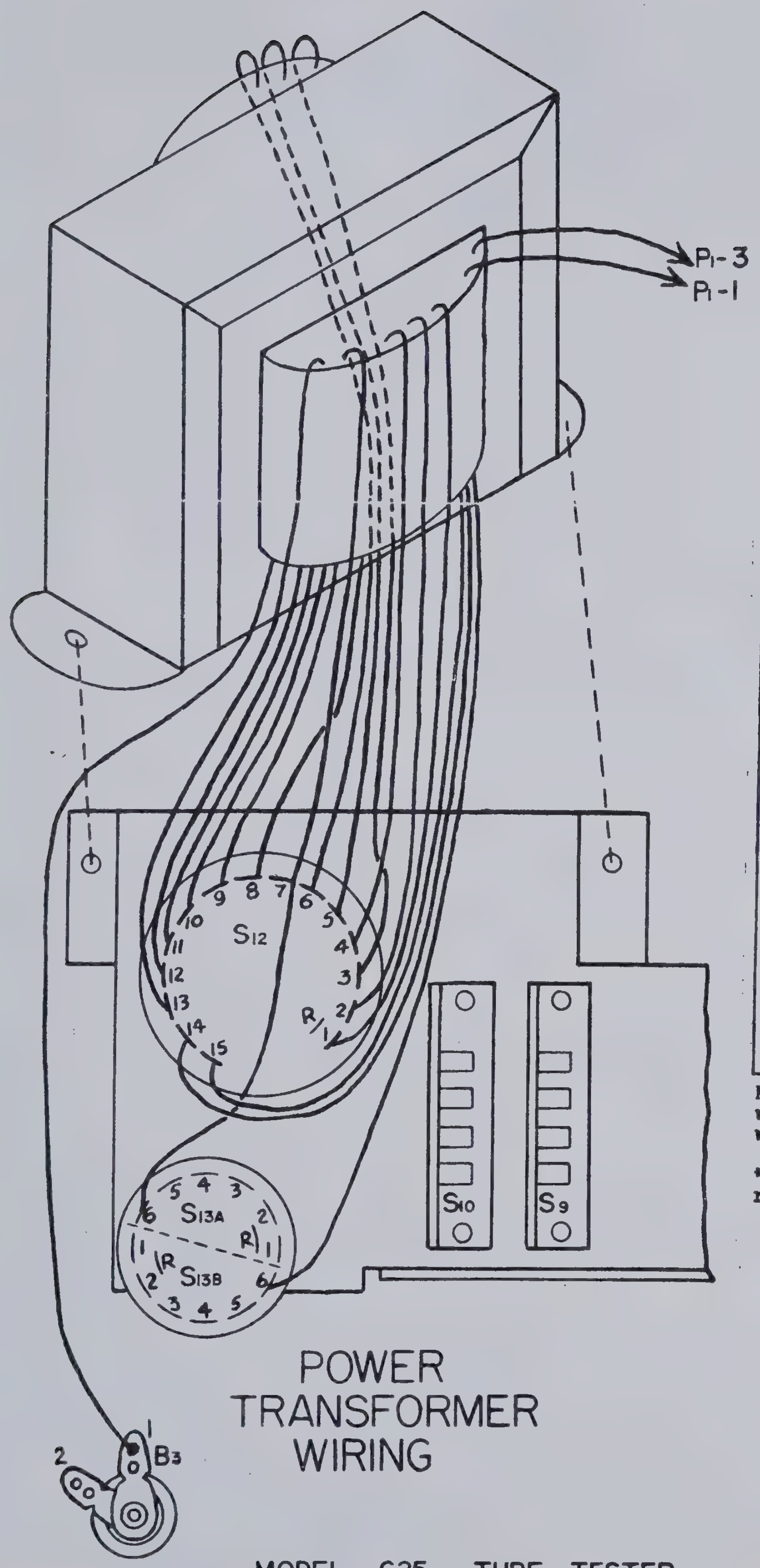


GRID CAP

PASS WIRE THRU CAP, SOLDER TO CLIP, RESET CLIP IN CAP



EICO



POWER
TRANSFORMER
WIRING

WIRING AND MOUNTING TRANSFORMER

Lay transformer in front of two vertical mounting brackets. (Do not mount as yet.)

Solder each lead to the appropriate pin on switches S12, S13A, S13B and overload bulb B3.

Dotted lines indicate wires which come from behind and under transformer

Chk.	Color	To	Remarks
	Red	(S)S12#1	Common
	Green	(S)S12#2	.75V
	* Green-White	(S)S12#3	1.4V
	Blue	(S)S12#4	2.0V
	Yellow	(S)S12#5	2.5V
	Brown	(S)S12#6	3.3V
	Brown-Yellow	(C)S12#7	5.0V
	Green-Red	(S)S12#8	6.3V
	* Red-Yellow	(S)S12#9	7.5V
	Orange	(S)S12#10	12.6V
	* Yellow-Green	(S)S12#11	25.0V
	Brown-Black	(S)S12#12	30.0V
	Black-White	(S)S12#13	50.0V
	* Red-White	(S)S12#14	70V
	Slate	(S)S12#15	110V
	White	(S)S13B#6	250V
	Black	(S)B3#1	Common Pri.
	Hook-up	(S)S12#7 to S13A#6(C)	

Mount transformer to vertical brackets with 6/32 nuts and bolts. Use 2 lock-washers.

* Differentiate between red-yellow and red-white, green-white and yellow-green.

MODEL 625 TUBE TESTER

ASSEMBLY PRINT NO. 5

ROLL CHART MOUNTING AND PANEL WIRING

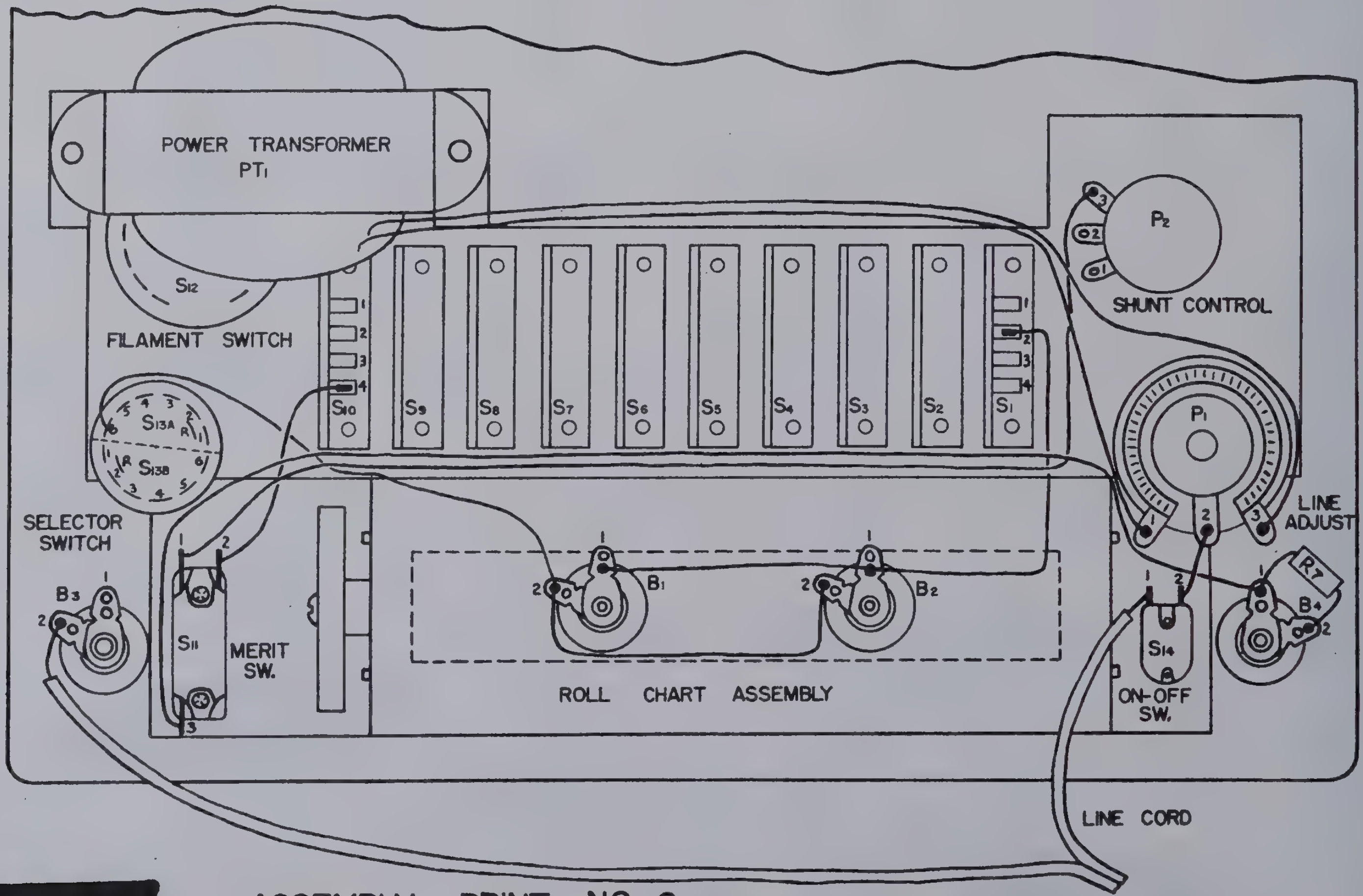
Remove scotch tape from Plastic Face, H38. Place face over 6" x 1" slot in panel and secure each edge to panel with the scotch tape.

Mount Roll Chart to panel by inserting switches S11 and S14 into respective holes on each side of Roll Chart Assembly. Secure on front of panel with 7/16" ring nuts.

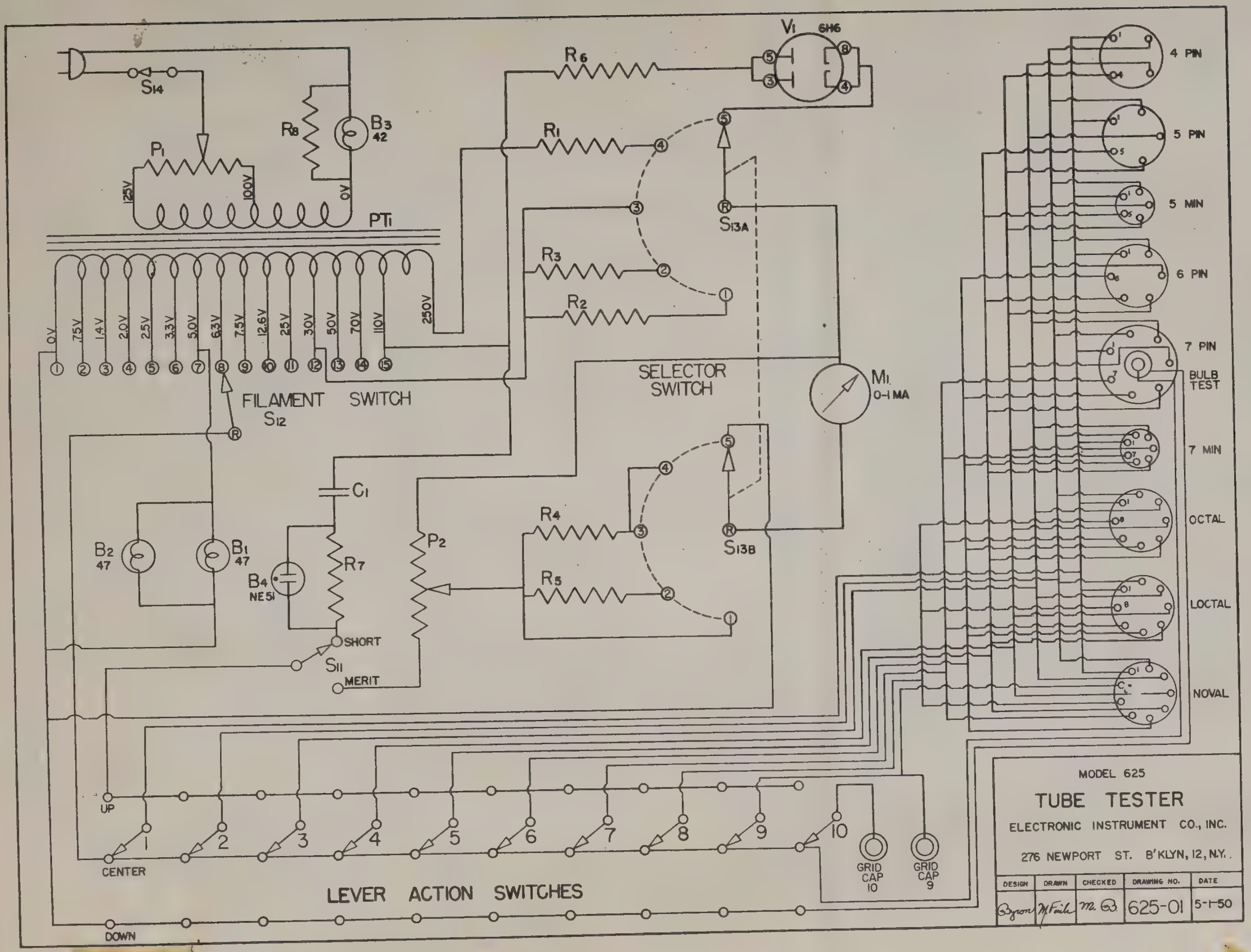
Ck.	Symbol	Description	From	To	Remarks
	PT1	Yellow -Black	Trans.	P1#1	Yellow - Black
		Green Black	Trans.	P1#3	Green - Black
	H23	Wire	(S)S13a#6	B1#2(C)	
	"	"	(S)B1#2	B2#2(S)	Orange
	"	"	(S)B1#1	B2#1(C)	
	"	"	(S)B2#1	S1#2(S)	
	"	"	(S)S10#4	S11#2(S)	
	"	"	(S)S11#1	P2#3(S)	
	"	"	(S)S11#3	B4#1(C)	[illegible]
	R7	500K	(S)B4#1	B4#2(S)	Red
	H23	Wire	(S)S14#2	P1#2(S)	

Thread line cord H31, through grommet H18 which is placed in hole on back of cabinet. Leave about 12" and then knot on inside of cabinet. Solder one wire to S14#1 and the other wire to B3#2. You have completed the general assembly of your tube tester. Check wiring carefully with particular regard to shorted tube pins and bare wires touching the panel. Secure handle to cabinet with 4 6/32 nuts and bolts. Use lockwashers under nuts. Mount 6H6 in wafer socket on bracket. Secure panel to cabinet with 8 self-tapping screws, H22.

ROLL CHART MOUNTING AND PANEL WIRING



EICO ASSEMBLY PRINT NO. 6 MODEL 625 TUBE TESTER



MODEL 625

TUBE TESTER

ELECTRONIC INSTRUMENT CO., INC.

276 NEWPORT ST. B'KLYN, 12, N.Y.

DESIGN	DRAWN	CHECKED	DRAWING NO.	DATE
Byron	M Faile	M. G.	625-01	5-1-50

PART #	SYMBOL	SPECIFICATION
1	B1	#47 PILOT LIGHT
1	B2	#47 PILOT LIGHT
2	B3	#42 OVERLOAD
3	B4	NE-51 SHORT IND.
4	C1	.01 MFD COND.
47	M1	0-1 MA METER
48	P1	100-200 OHM 25W. POT.
49	P2	200 OHM POT.
51	R1	2500 OHM 5W RES.
52	R2	4700 OHM 5% RES.
53	R3	820 OHM 5% RES.
54	R4	1600 OHM 5% RES.
55	R5	510 OHM 5% RES.
56	R6	95K OHM 1% RES.
57	R7	500K OHM RES.
58	R8	3-5 OHM RES.
59	S1-S10	SPTT LEVER ACTION
60	S11	SPDT PUSH BUTTON
61	S12	SP 15 POS. FIL. SW.
62	S13	DP 5 POS. SEL. SW.
63	S14	SPST ON-OFF SW.
64	V1	6H6 TUBE

EICO

SERVICING NOTES

1. Check wiring procedure carefully. Nearly all cases of trouble in the past have improper wiring as their source.

2. Check transformer voltages as follows: (a) Adjust "Line Adjust" potentiometer. (b) Connect an A.C. voltmeter across both grid caps. With all lever switches in the "center" position, except #10 which should be in the "Down" position, rotate the filament switch from zero to 110 volts. The voltage measured should be as indicated on the filament switch with a factor of ± 20%. If any of these voltages are out of order recheck transformer wiring and color code.

3. If you are still having difficulty, write to our engineering department (Dept. T, Electronic Instrument Co.,Inc., 276 Newport Street, Brooklyn 12, N.Y.) listing all voltages and whatever other indications you have which might be of help.

4. If desired, you may return the instrument to the factory where it will be placed in operating condition for a service charge of $4.00. There will be an additional charge for replacement of any parts or alterations as required due to misuse, violation of instructions, or damage in construction. It is suggested that extreme care be taken in packing, and original carton and fillers be used wherever possible. Please ship unit prepaid, Railway Express. The instrument will be returned as soon as possible, express collect.

ROLL CHART MOUNTING AND PANEL WIRING

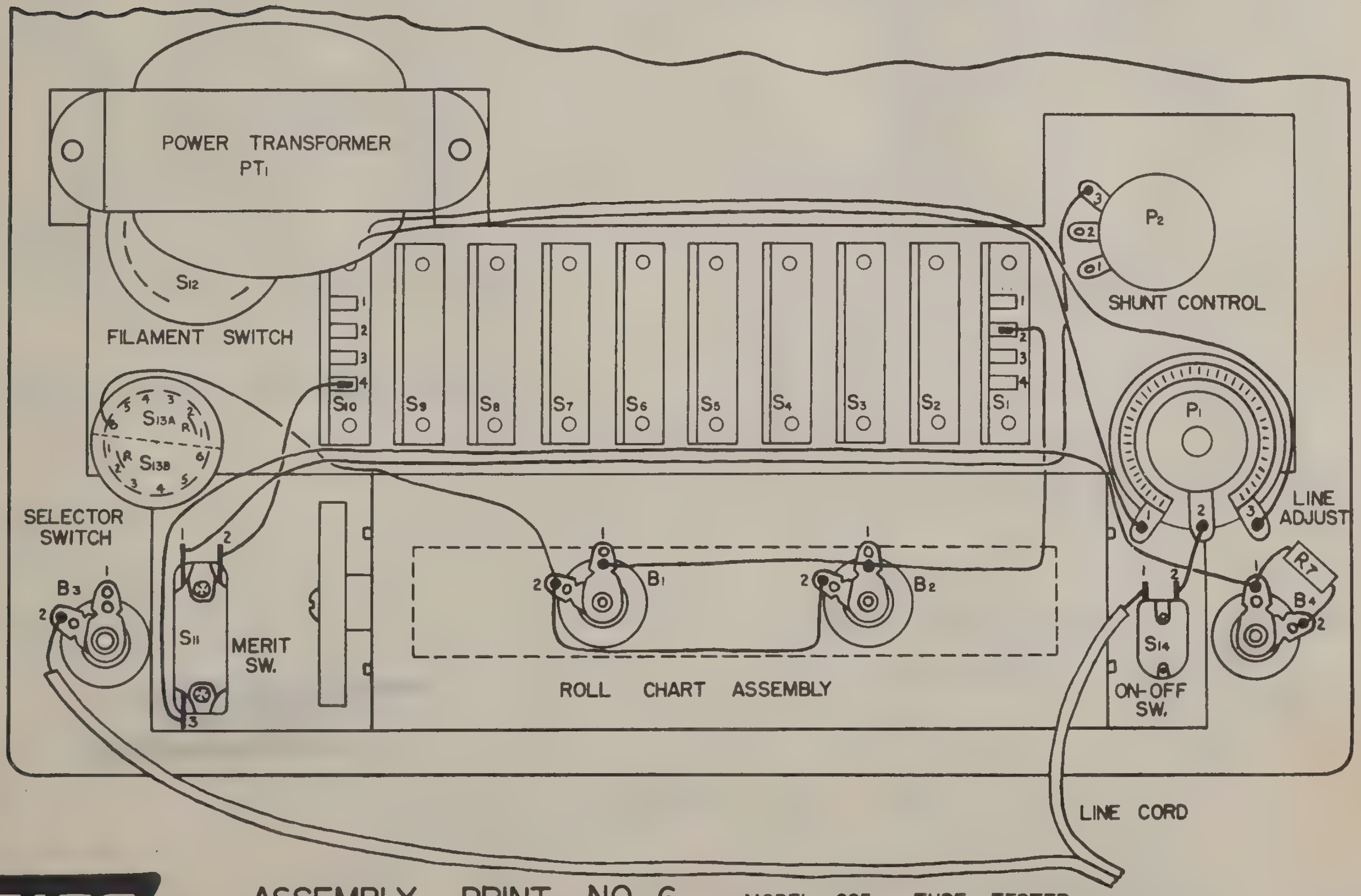
Remove scotch tape from Plastic Face, H38. Place face over 6" x 1" slot in panel and secure each edge to panel with the scotch tape.

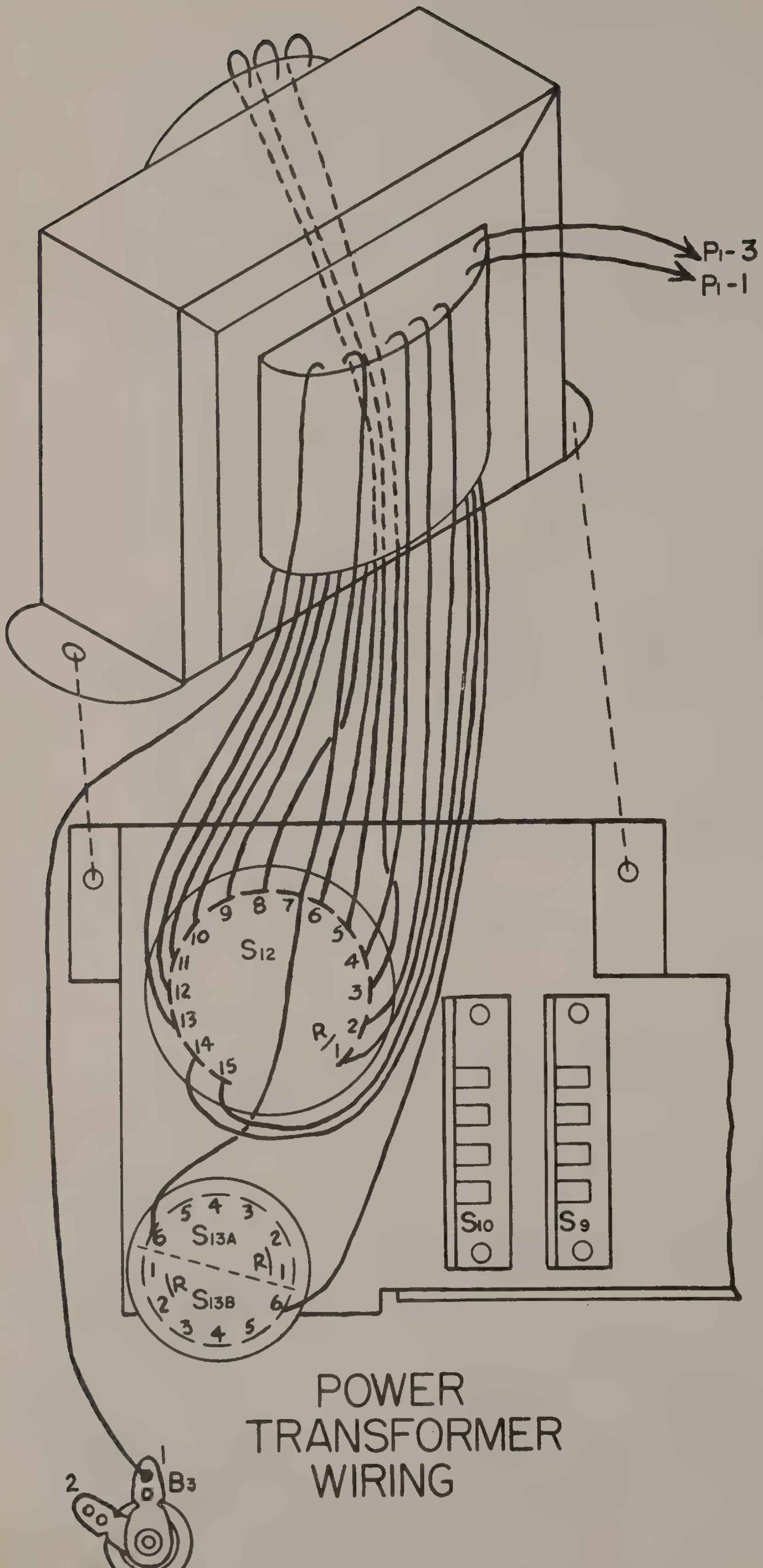
Mount Roll Chart to panel by inserting switches S11 and S14 into respective holes on each side of Roll Chart Assembly. Secure on front of panel with 7/16" ring nuts.

Ck.	Symbol	Description	From	To	Remarks
	PT1	Yellow -Black	Trans.	P1#1	Yellow-Black
		Green Black	Trans.	P1#3	Green-Black
	H23	Wire	(S)S13a#6	B1#2(C)	Orange
	"	"	(S)B1#2	B2#2(S)	
	"	"	(S)B1#1	B2#1(C)	
	"	"	(S)B2#1	S1#2(S)	
	"	"	(S)S10#4	S11#2(S)	
	"	"	(S)S11#1	P2#3(S)	
	"	"	(S)S11#3	B4#1(C)	Red
	R7	500K	(S)B4#1	B4#2(S)	Red
	H23	Wire	(S)S14#2	P1#2(S)	

Thread line cord H31, through grommet H18 which is placed in hole on back of cabinet. Leave about 12" and then knot on inside of cabinet. Solder one wire to S14#1 and the other wire to B3#2. You have completed the general assembly of your tube tester. Check wiring carefully with particular regard to shorted tube pins and bare wires touching the panel. Secure handle to cabinet with 4 6/32 nuts and bolts. Use lockwashers under nuts. Mount 6H6 in wafer socket on bracket. Secure panel to cabinet with 8 self-tapping screws, H22.

ROLL CHART MOUNTING AND PANEL WIRING





POWER
TRANSFORMER
WIRING

WIRING AND MOUNTING TRANSFORMER

Lay transformer in front of two vertical mounting brackets. (Do not mount as yet.)

Solder each lead to the appropriate pin on switches S12, S13A, S13B and overload bulb B3.

Dotted lines indicate wires which come from behind and under transformer

Chk.	Color	To	Remarks
	Red	(S)S12#1	Common
	Green	(S)S12#2	.75V
	* Green-White	(S)S12#3	1.4V
	Blue	(S)S12#4	2.0V
	Yellow	(S)S12#5	2.5V
	Brown	(S)S12#6	3.3V
	Brown-Yellow	(C)S12#7	5.0V
	Green-Red	(S)S12#8	6.3V
	* Red-Yellow	(S)S12#9	7.5V
	Orange	(S)S12#10	12.6V
	* Yellow-Green	(S)S12#11	25.0V
	Brown-Black	(S)S12#12	30.0V
	Black-White	(S)S12#13	50.0V
	* Red-White	(S)S12#14	70V
	Slate	(S)S12#15	110V
	White	(S)S13B#6	250V
	Black	(S)B3#1	Common Pri.
	Hook-up	(S)S12#7 to S13A#6(C)	

Mount transformer to vertical brackets with 6/32 nuts and bolts. Use 2 lock-washers.

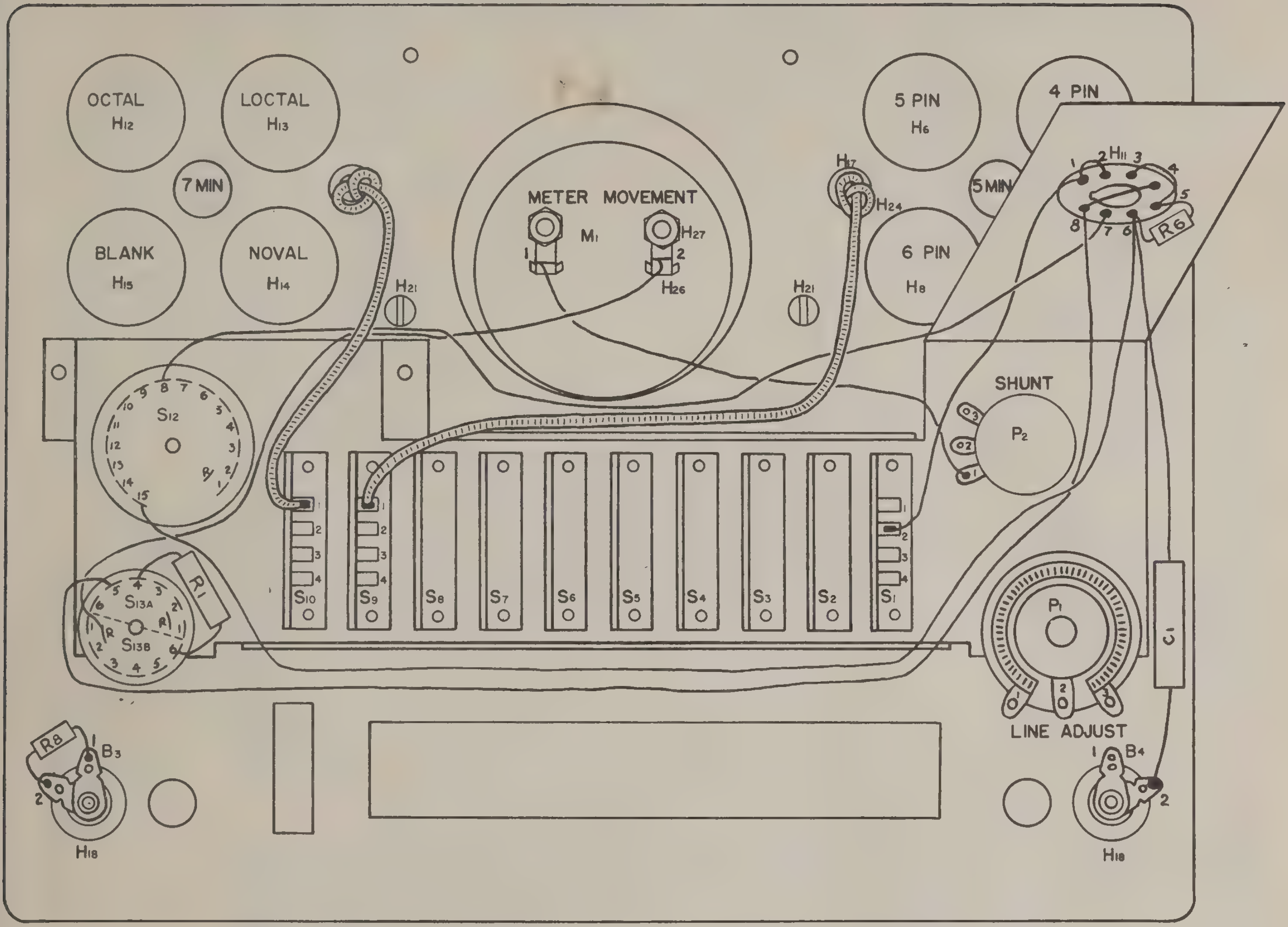
* Differentiate between red-yellow and red-white, green-white and yellow-green.

EICO

MODEL 625 TUBE TESTER

ASSEMBLY PRINT NO.5

PANEL WIRING



ASSEMBLY PRINT NO. 4

MODEL 625 TUBE TESTER

PANEL WIRING

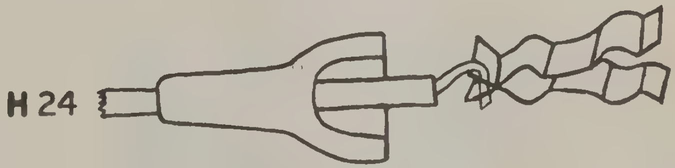
Place B3 and B4 with associated sockets into grommets as shown in insert. Make certain bulb B3 is screwed in tight.

Mount meter with 2- 6/32 bolts, H21 and 2 lockwashers, H28.

Connect meter lugs H26 to meter with nuts H27, and washers.

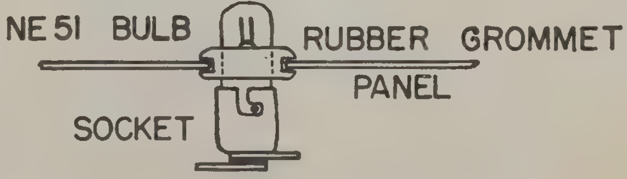
Chk.	Symbol	Description	From	To	Remarks
	H23	Wire	(C)S12#15	H11#6(C)	
	H23	Wire	(C)S12#8	H11#7(S)	
	R6	95K ohms	(C)H11#6	H11#5(C)	See Note
	H25	Bare Wire	(S)H11#5	H11#3(S)	
	H25	Bare Wire	(S)H11#2	H11#1(C)	
	H23	Wire	(S)H11#1	S1#2(S)	
	C1	.01 Mfd.	(S)H11#6	B4#2(C)	Spaghetti
	H25	Wire - Bare	(S)H11#4	H11#8(C)	
	H23	Wire	(S)H11#8	S13A#5(S)	
	R1	2500 ohms	(S)S13A#4	S13B#6(S)	
	H23	Wire	(S)S13B#R	M1#2(S)	
	H23	Wire	(S)M1#1	P2#1(S)	
	R8	3-5 Res. ohms	(C)B3#1	B3#2(C)	
	H24	Kinkless Wire	Grid Cap	S9#1(S)	Leave 12½" of wire from knot to grid cap
	"	"	Grid Cap	S10#1(S)	

NOTE: If a 1% matched pair of resistors is supplied, connect these in series and substitute for single resistor R6 as shown in diagram.



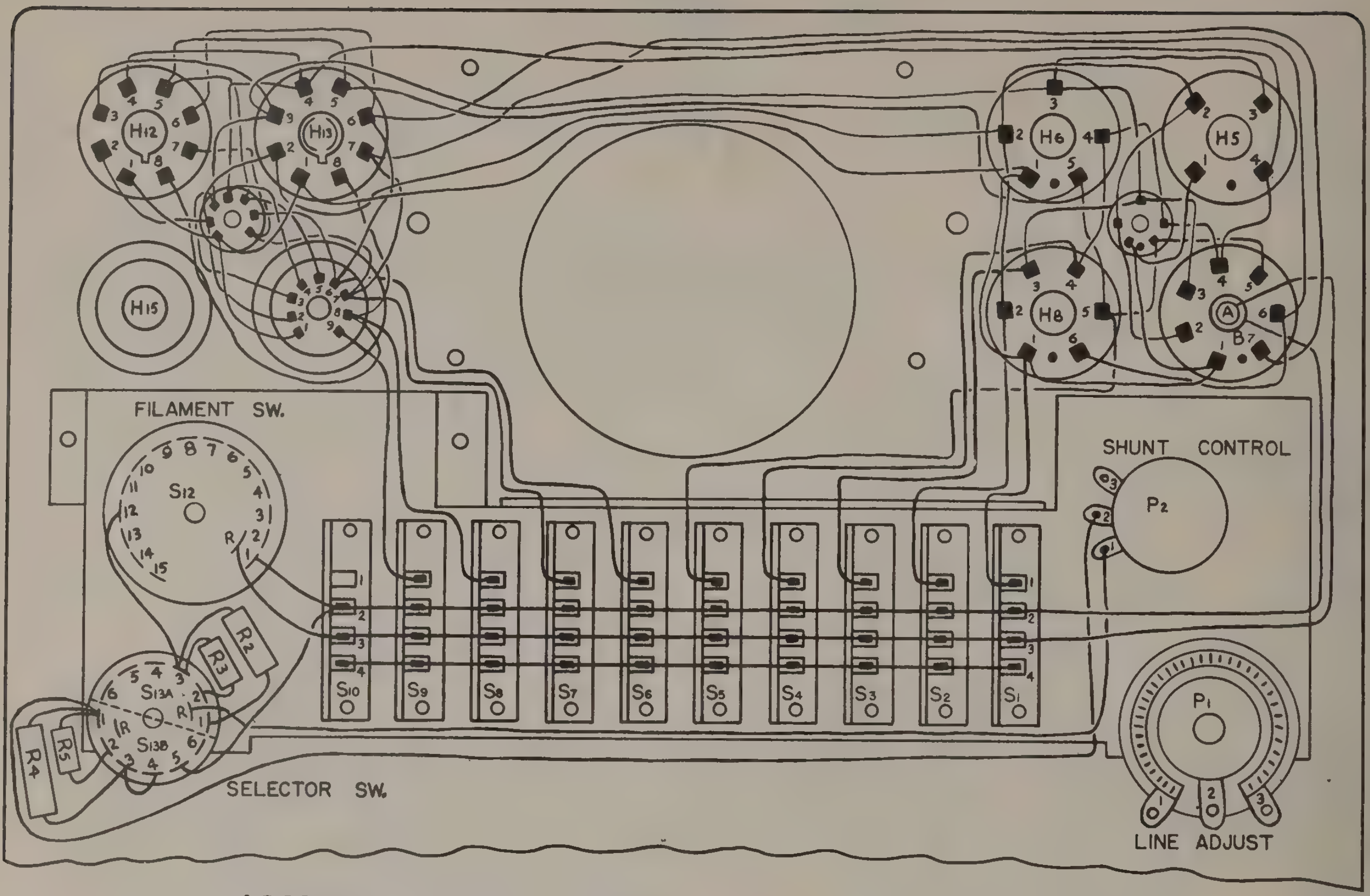
GRID CAP

PASS WIRE THRU CAP, SOLDER TO CLIP, RESET CLIP IN CAP



EICO

PANEL WIRING



ASSEMBLY PRINT NO.3

MODEL 625 TUBE TESTER

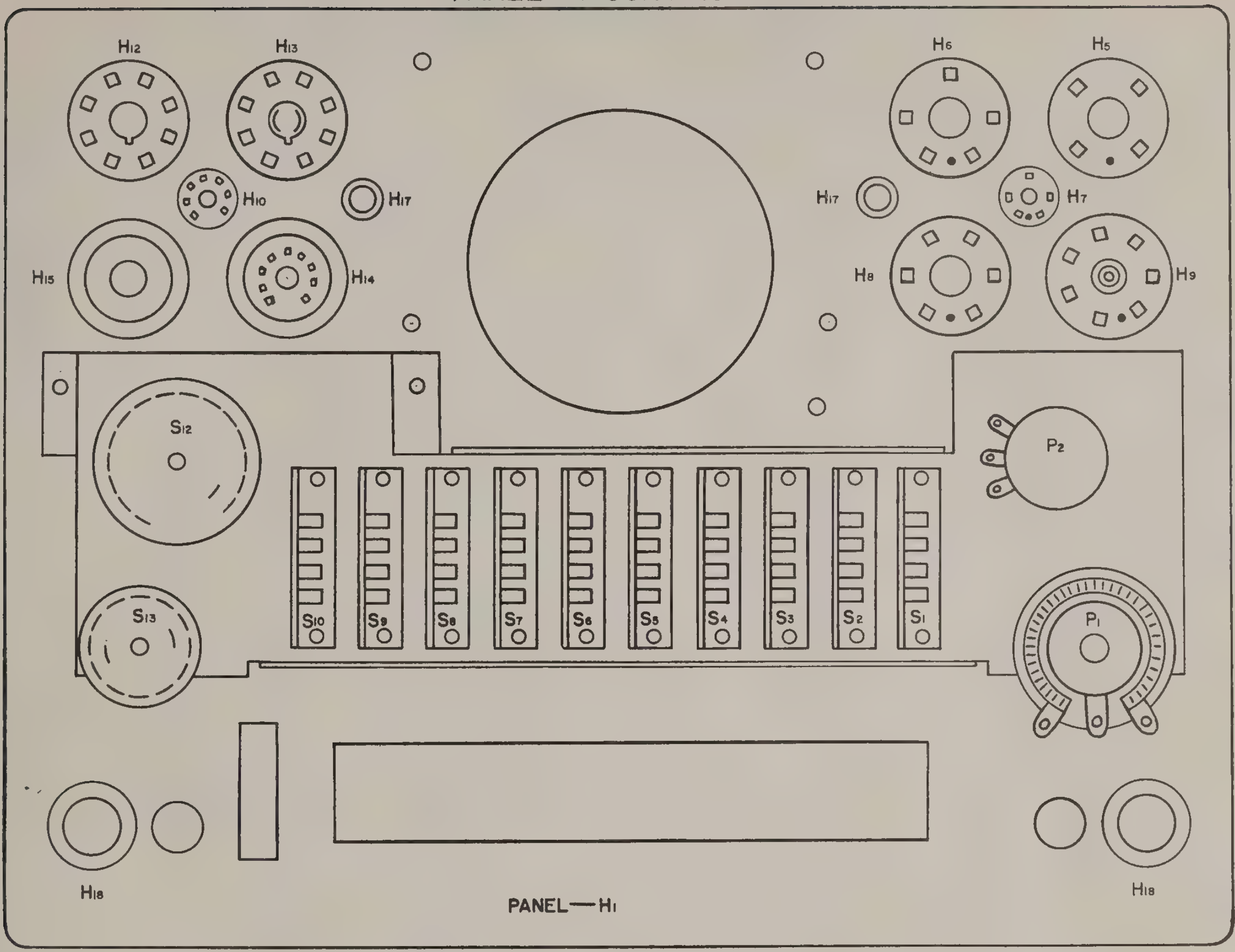
PANEL WIRING

Chk	Sym.	Descrip.	From	To	Remarks
	H23	Wire	(S)H5#1	H7#1(C)	
	"	"	(S)H7#1	H9#1(C)	
	"	"	(S)H9#1	H8#1(C)	
	"	"	(C)H8#1	S1#1(S)	
	"	"	(S)H8#1	H6#1(C)	
	"	"	(S)H6#1	H13#1(C)	
	"	"	(S)H13#1	H10#1(C)	
	"	"	(C)H10#1	H12#1(S)	
	"	"	(S)H10#1	H14#1(S)	
	"	"	(S)H9#2	H7#2(C)	
	"	"	(S)H7#2	H5#2(C)	
	"	"	(S)H5#2	H6#2(C)	
	"	"	(C)H6#2	H8#2(C)	
	"	"	(S)H8#2	S2#1(S)	
	"	"	(S)H6#2	H13#2(C)	
	"	"	(S)H13#2	H10#2(C)	
	"	"	(C)H10#2	H12#2(S)	
	"	"	(S)H10#2	H14#2(S)	
	"	"	(S)H5#3	H6#3(C)	
	"	"	(C)H6#3	H7#3(C)	
	"	"	(C)H7#3	H9#3(S)	
	"	"	(S)H7#3	H8#3(C)	
	"	"	(S)H8#3	S3#1(S)	
	"	"	(S)H6#3	H13#3(C)	
	"	"	(C)H13#3	H12#3(S)	
	"	"	(s)H13#3	H10#3(C)	
	"	"	(S)H10#3	H14#3(S)	
	"	"	(C)H5#4	H9#4(C)	
	"	"	(S)H9#4	H7#4(C)	
	"	"	(S)H7#4	H6#4(C)	
	"	"	(S)H6#4	H8#4(C)	
	"	"	(S)H8#4	S4#1(S)	
	"	"	(S)H5#4	H13#4(C)	
	"	"	(C)H13#4	H12#4(S)	
	"	"	(S)H13#4	H10#4(C)	
	"	"	(S)H10#4	H14#4(S)	

PANEL WIRING

Chk	Sym.	Description	From	To	Remarks
	H23	Wire	(S)H9#5	H7#5(C)	
	"	"	(S)H7#5	H8#5(C)	
	"	"	(C)H8#5	S5#1(S)	
	"	"	(S)H8#5	H6#5(C)	
	"	"	(S)H6#5	H13#5(C)	
	"	"	(S)H13#5	H12#5(C)	
	"	"	(S)H12#5	H10#5(C)	
	"	"	(S)H10#5	H14#5(S)	
	"	"	(S)H8#6	H9#6(C)	
	"	"	(S)H9#6	H13#6(C)	
	"	"	(C)H13#6	H12#6(S)	
	"	"	(S)H13#6	H14#6(C)	
	"	"	(C)H14#6	H10#6(S)	
	"	"	(S)H14#6	S6#1(S)	
	"	"	(S)H9#7	H13#7(C)	
	"	"	(s)H13#7	H14#7(C)	
	"	"	(C)H14#7	H10#7(C)	
	"	"	(S)H10#7	H12#7(S)	
	"	"	(S)H14#7	S7#1(S)	
	"	"	(S)H13#8	H14#8(C)	
	"	"	(C)H14#8	H12#8(S)	
	"	"	(S)H14#8	S8#1(S)	
	"	"	(S)H14#9	S9#1(C)	
	"	"	(S)P2#2	S13B#1(C)	
	R4	1600 Res.	(C)S13B1	S13B#3(C)	
	H25	Bare Wire	(S)S13B#3	S13B#4(S)	
	R5	510 Res.	(S)S13B#1	S13B#2(S)	
	H23	Wire	(C)S12#12	S13A#3(C)	
	R2	4700	(C)S13A#3	S13A#1(S)	
	R3	820	(S)S13A#3	S13A#2(S)	
	H23	Wire	(S)S13AR	P2#1(C)	
	"	"	(S)S13B#5	S10#2(C)	
	"	"	(C)S10#2	S12#1(C)	
	"	"	(S)S12#R	S10#3(C)	
	"	"	(C)S1#2	H9#B(S)	
	"	"	(C)S1#3	H9#A(S)	
	H25	Bare	S1#2	S10#2	thru all #2 from S1-S10
			S1#3	S10#3	" #3 "
			S1#4	S10#4	" #4 "

PANEL MOUNTING



ASSEMBLY PRINT NO. 2 MODEL 625 TUBE TESTER

PANEL MOUNTING

(1) Insert the large seven prong socket (H9) through the front of the panel. (Orient pins exactly as shown on Assembly Print #2).

(2) Select proper retaining ring (circular wavy strip of spring steel).

(3) Following photograph, insert one end of retaining ring into socket groove and, while holding with one finger, work remaining portion around socket with a screw driver.

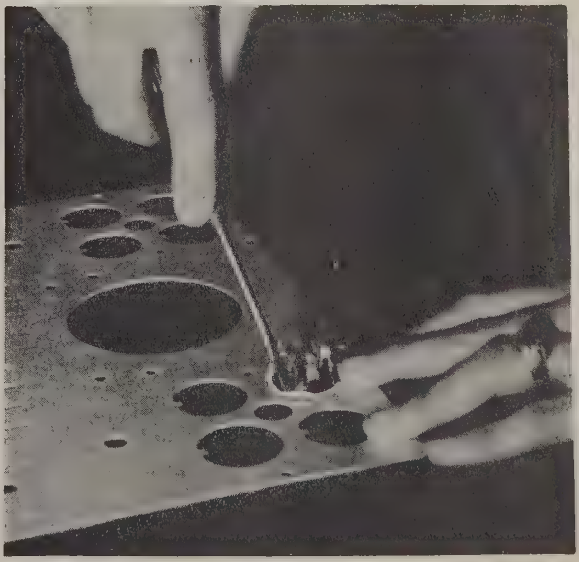
(4) Repeat steps 1, 2 and 3 for sockets H5, H6, H8, H12, H13, H14 and H15.

(5) Mount two retaining small sockets, H7 and H10, with small star retaining rings. The rings are simply pressed into place.

(6) Mount the two smaller grommets, H17, and the 2 larger grommets, H18, into proper holes on panel. Although these may seem too large, they may be inserted by using a blunt screwdriver and a slight pressure.

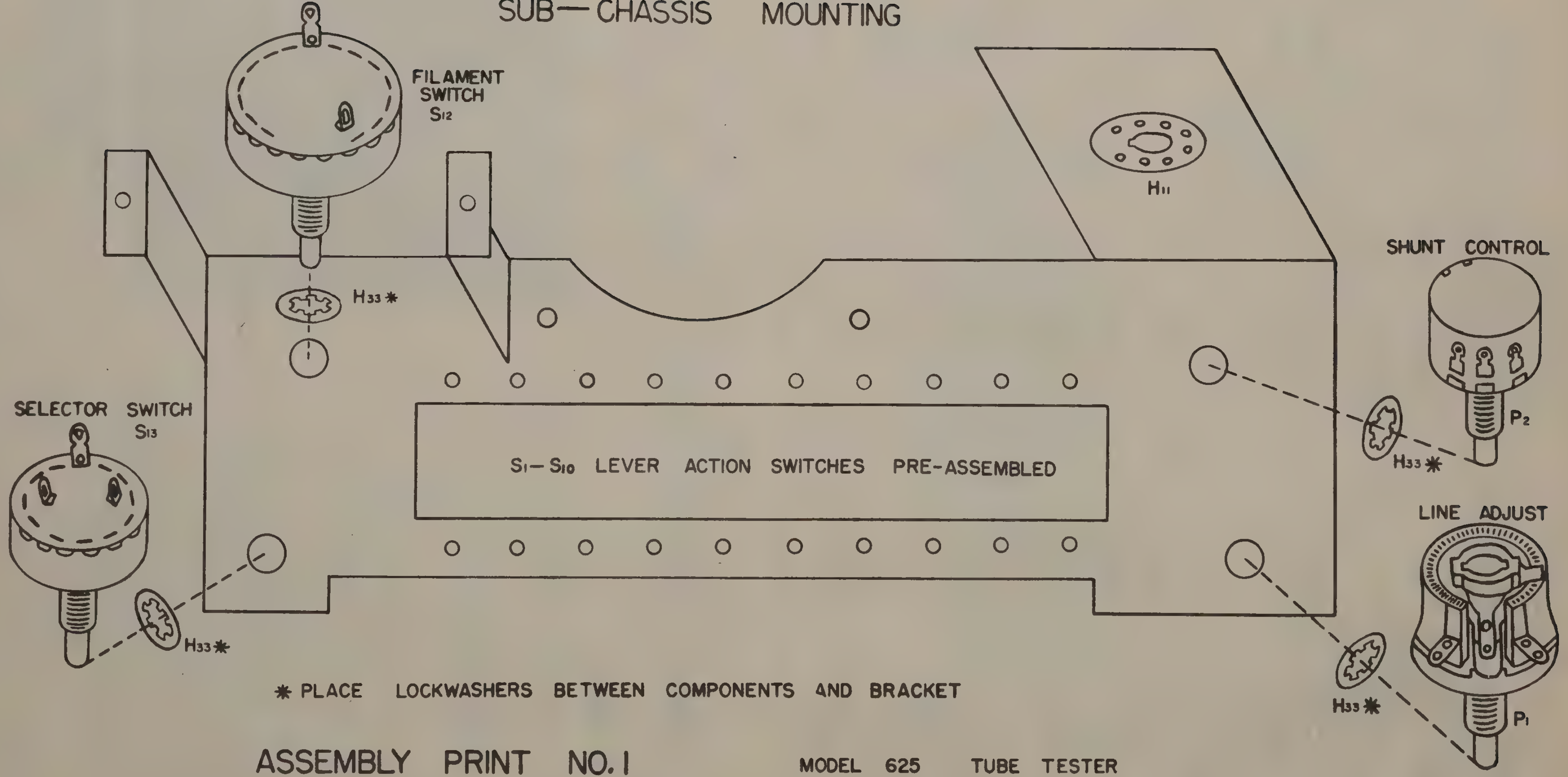
(7) Referring to Assembly Print #1, place subchassis over panel and insert ten lever switch arms through rectangular slots on panel. Mount P1, P2, S12 and S13 using lockwashers, H33 and panel washers, H36. Secure with 3/8 inch nuts, H35. Note: Lockwashers, H33, mount between potentiometers and subchassis. This also applies to the switches. Do not insert any hardware between subchassis and panel. Panel washers are placed on the panel side directly under the 3/8 inch nuts to prevent marring of the panel.

(8) In the following instructions the letter (S) means "solder" and the letter (C) means "connect". As an example consider the first line of instructions on the following page: A piece of wire (H23) is "soldered" on pin #1 of the 4 pin socket, (H5), and then "connected to pin #1 of the small 5 pin socket, H7. Note: It is not soldered on the connected side since another piece of wire will be attached there. When a step is completed, place a small mark in the Chk (Check) column.



EICO

SUB—CHASSIS MOUNTING



* PLACE LOCKWASHERS BETWEEN COMPONENTS AND BRACKET

ASSEMBLY PRINT NO. 1

MODEL 625 TUBE TESTER

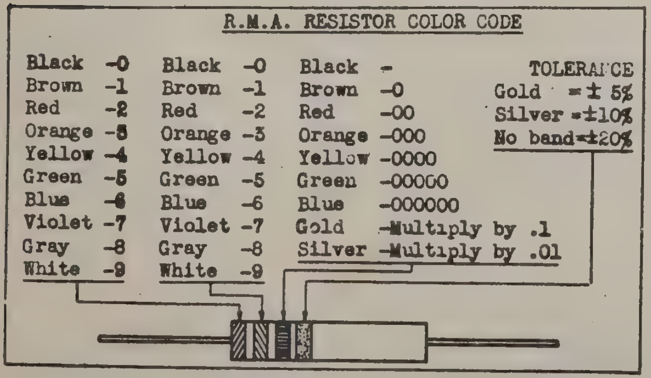
PLEASE SEE FOLLOWING PAGE FOR INSTRUCTIONS

EICO

PARTS LIST - MODEL 625K - TUBE TESTER

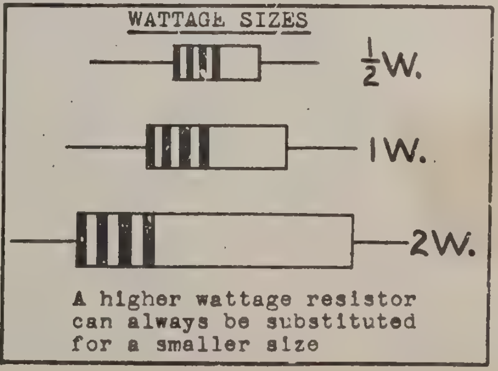
Chk	Part No.	Symbol	Description	Amount
✓	1	B1,B2	Pilot Light #47	2
✓	2	B3	Overload Bulb #42	1
✓	3	B4	Short Indicator NE-51	1
✓	4	C1	.01 mfd. Condenser 400V	1
✓	5	H1	Panel	1
✓	6	H2	Sub-chassis	1
✓	7	H3	Screw Socket	1
✓	8	H4	Bayonet Socket	3
✓	9	H5	4 pin Socket (lge) and Retainer Ring	1
✓	10	H6	5 pin Socket and RR	1
✓	11	H7	5 pin Socket (Hytron) and RR	1
✓	12	H8	6 pin Socket and RR	1
✓	13	H9	7 pin Socket (large) and RR	1
✓	14	H10	7 pin Socket (miniature) and RR	1
✓	15	H11	8 pin Socket (Wafer) Riveted	1
✓	16	H12	8 pin Socket (octal) and RR	1
✓	17	H13	8 pin Socket (loctal) and RR	1
✓	18	H14	9 pin Socket and RR	1
✓	19	H15	Blank Socket and RR	1
	20	H16	Pointer Knobs	4
	21	H17	Rubber Grommets ¼"	2
✓	22	H18	Rubber Grommets ½"	3
✓	23	H19	Rubber Grommets 5/8" Roll Chart	2
	24	H20	6/32 Nuts	6
	25	H21	6/32 x 1/4 Bolts	8
	26	H22	6/32 Self Tapping	8
✓	27	H23	Wire (roll)	1
✓	28	H24	Wire-kinkless (roll)	1
✓	29	H25	Wire-bare (roll)	1
	30	H26	Meter lugs	2
	31	H27	10/32 Meter Nuts	2
	32	H28	#6 Lockwasher	6
	33	H29	Cabinet	1
	34	H30	Handle	1
	35	H31	Line Cord	1
	36	H32	Grid Caps	2
	37	H33	3/8 Lockwasher	4
	38	H34	Scotch Tape	1
	39	H35	3/8 Nuts	4
	40	H36	3/8 Panel Washers	4
	41	H37	7/16 Ring Nuts	3
	42	H38	Celluloid Screen	1
	43	H39	Roll Chart Assembly	1
	44	H40	Lever Switch Knobs	10
	45	H41	Meter Washers	2
	46	H42	Wire- Spaghetti. 6 inches	1
	47	M1	0-1 Ma. Meter Movement	1
	48	P1	Line Adjust Pot. 100-250 ohm	1
	49	P2	Shunt Control 200 ohm	1
	50	PT1	Power transformer	1
	51	R1	2500 ohm 5W Resis	1
	52	R2	4700 " 1W "	1
	53	R3	820 " 1W "	1
	54	R4	1600 " 1W "	1
	55	R5	510 " ½W "	1
	56	R6	95K " 1W "	1
	57	R7	500K " ½W "	1
	58	R8	3-5 " 1W "	1
	59	S1-S10	Single Pole 3 position Lever Switches	10
	60	S11	SPDT Push Button	1
	61	S12	SP 15 position Filament Switch	1
	62	S13	DP 5 position Selector Switch	1
	63	S14	SPST On-Off Switch	1
	64	V1	6H6 Tube	1

RMA COLOR CODES



R.M.A. RESISTOR COLOR CODE

Black	-0	Black	-0	Black	-	TOLERANCE
Brown	-1	Brown	-1	Brown	-0	Gold = ± 5%
Red	-2	Red	-2	Red	-00	Silver = ±10%
Orange	-3	Orange	-3	Orange	-000	No band = ±20%
Yellow	-4	Yellow	-4	Yellow	-0000	
Green	-5	Green	-5	Green	-00000	
Blue	-6	Blue	-6	Blue	-000000	
Violet	-7	Violet	-7	Gold	-Multiply by .1	
Gray	-8	Gray	-8	Silver	-Multiply by .01	
White	-9	White	-9			



A higher wattage resistor can always be substituted for a smaller size

EICO TUBE TESTER MODEL 625

CONSTRUCTION BOOK

GENERAL

A tube tester (e.g. EICO Model 625) is a necessary and essential instrument. It is veritably indispensable in the servicing of modern receivers, television, etc.

For rapid reference and easy use, the EICO 625 Tube Tester has a "speed-roll chart" and numbered lever switches that connect to each tube pin individually. For that reason special care and much preparation by our engineering department was required prior to announcing an instrument of this type. Years of EICO "know-how" in instrument and kit design enabled us to reduce and simplify the mechanical construction of this device without relinquishing in any way the necessary and desirable design features. Although at first glance the tube tester seems like a formidable device to construct and wire, it develops into a relatively simple affair when our carefully prepared instructions are followed. As an example, in the tube wiring, all pins #1 are connected together, then all pins #2, etc. After the various sockets are completed, the remaining wiring is minor.

CONSTRUCTION

Before starting the actual construction, study the schematic and pictorial wiring thoroughly, getting all of the steps clear in your mind. Do not rush the assembly. Care will pay dividends. It is suggested, because of stray pickup, leads improperly run, etc., that you place your wiring exactly as shown on diagrams.

NOTE: Use a good grade of rosin core solder. Under no circumstances use acid core solder or acid flux, inasmuch as this can cause serious corrosion. Before soldering, make certain there is a good mechanical connection. The solder must flow before you remove the soldering iron. This will prevent rosin joints which are poor electrical conductors. If you are soldering close to a part, hold the ends of a pair of longnose pliers between the part and solder joint. The pliers will conduct the heat away and prevent the component from being unduly overheated.

Carefully unwrap all the parts and check them in the space provided on the parts list. Note; In order to insure the supply of kits and prompt delivery, we are forced to order from several sources. The standard manufacturers' values are interchangeable, etc. You may find, therefore, that a value may vary within the permissible circuit tolerance: e.g., a resistance of 470,000 ohms may be substituted for, or may measure 510,000 ohms, etc. All parts supplied will work just as well as the part for which it was substituted. Most parts have a tolerance rating of 5 to 20% and the circuit is designed to take these variations into account.

Friday

Shrimp
Rice
Buttered Peas

Sat. tailgate Mkt.!

Chicks
Left-overs
in
Freezer!

Sunday:

Easter!!
~~[illegible]~~
~~Potato~~
~~[illegible]~~
? ?

Pick up little Sarah Trauer!

Monday

Green Beans
Baked Potato
Chicken Breast

Tues:

Salmon
Rice
Greens

Wed.

Pizza
Green Salad

Thurs

Strip
? steaks
Baked Potato
Green Salad

Instruction manual
manual - Eyclo 625 ?

Nelson ~~Word~~ ~~Outmt~~
Wmt
(425) 641 - 410[illegible]3
Call in late afternoon

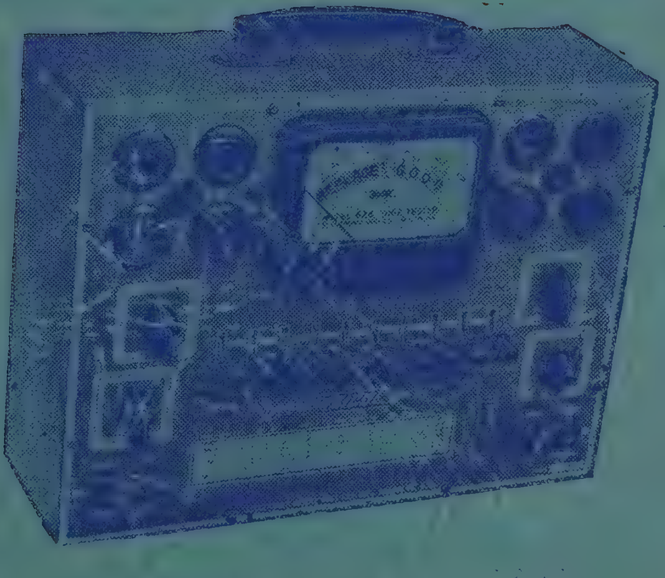
INSTRUCTION MANUAL

FOR

Model 625

TUBE TESTER

EICO



ELECTRONIC INSTRUMENT CO.
276 NEWPORT STREET
BROOKLYN 12, N. Y.

REPLACE, WEAK, GOOD

If a tube reads in the "REPLACE" region, it has low emission and should be replaced. If it reads in the "WEAK" region, it is questionable, but probably operative. If it reads in the "GOOD" region, the tube has proper emission. The 0-1000 scale on the meter is for tube matching.

TUBE MERIT: This is a momentary contact switch and when depressed indicates the emission characteristic of the tube.

PILOT LIGHT TEST: Pilot lights may be tested by selecting the proper filament voltage on the FILAMENT switch and inserting the pilot light into the center of the large 7 prong socket.

FILAMENT CONTINUITY:
You will note that several of the numbers on the roll chart are in bold type; these correspond to the levers which are connected to the tube filaments. Move each of the levers in bold print one at a time to the "up" position and back to the original position. The neon bulb Short indicator will light in the "up" position if the filaments are intact.

OPEN ELEMENT TEST: With "MERIT" switch depressed, move each of the levers that are in the "up" position, one at a time to the center position and back. The meter reading should dip greatly for the control grid of the tube and slightly for the screen, suppressor and plate elements. If no change is observed, the element is probably open.

NEW TUBES: EICO, in accordance with its recognized policy of protecting all instruments against obsolescence will periodically issue new roll charts and data sheets. If you will send your name and a self-addressed envelope, you will be notified when the new charts are available and their cost. The latter will be nominal.

Although it is possible for the serviceman to develop the settings for new tubes, it is not recommended due to the extra equipment necessary.

For an interim period, "between the old and new roll charts," the following procedure may be used for determining the settings for new tubes.

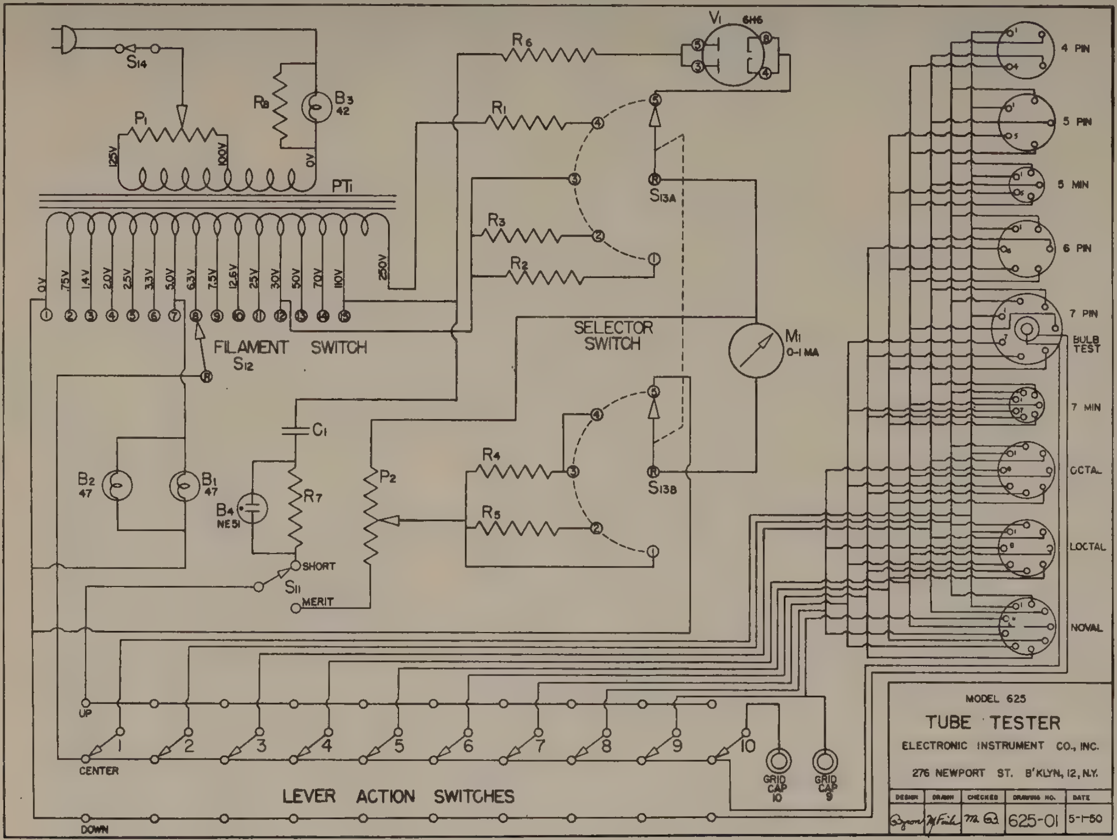
(1) Move all levers to the "down" position.
(2) Move either one of the filament levers to the center position.
(3) Move the grid, screen, suppressor and plate levers to the "up" position.
(4) If the normal current rating of the tube is between zero and 3 ma. use position 1 on the SELECTOR switch; position 2 for tubes from 3-15 ma; position 3 for filament type above 15 ma; position 4 for gaseous and magic eye tubes.
(5) Move the FILAMENT switch to the proper filament voltage.
(6) Starting with the SHUNT control at zero, depress the MERIT switch and gradually increase the "Shunt" setting until the meter reads approximately 800.
(7) Check several other tubes and use the average "SHUNT" reading for the "SHUNT" setting.

GUARANTEE:- The Electronic Instrument Company guarantees to replace any part or component which proves defective under normal use within 90 days of purchase date.

NEW TUBES

TUBE	SHUNT	FIL.	SEL.	UP	DOWN

and numbered lever switches that connect to



PART #	SYMBOL	SPECIFICATION
1	B1	#47 PILOT LIGHT
1	B2	#47 PILOT LIGHT
2	B3	#42 OVERLOAD
3	B4	NE-51 SHORT IND.
4	C1	.01 MFD COND.
47	M1	0-1 MA METER
48	P1	100-200 OHM 25W. POT.
49	P2	200 OHM POT.
51	R1	2500 OHM 5W RES.
52	R2	4700 OHM 5% RES.
53	R3	820 OHM 5% RES.
54	R4	1600 OHM 5% RES.
55	R5	510 OHM 5% RES.
56	R6	95K OHM 1% RES.
57	R7	500K OHM RES.
58	R8	3-5 OHM RES.
59	S1-S10	SPTT LEVER ACTION
60	S11	SPDT PUSH BUTTON
61	S12	SP 15 POS. FIL. SW.
62	S13	DP 5 POS. SEL. SW.
63	S14	SPST ON-OFF SW.
64	V1	6H6 TUBE

EICO TUBE TESTER MODEL 625

DESCRIPTION

The Model 625 Tube Tester has been designed to test practically all current radio and television receiving and a number of commonly encountered transmitting tubes. With this basic purpose in mind, concentration is next placed on simplicity of operation and circuit flexibility regarding new or future tubes.

SPECIAL FEATURES:

(1) Tests practically all tubes as described above.
(2) Speed type lever switches- speed and accuracy.
(3) Individual tube element testing. Specially designed against obsolescence to accomodate future tubes.
(4) Circuit overload bulb- indicates overload on transformer.
(5) Short test- indicates shorted tube elements.
(6) Large- easy-to-read meter.
(7) Illuminated- no backlash- speed roll chart- simplifies reading and finding of tubes.
(8) Lifetime etched, rub-proof panel.
(9) Durable steel carrying case.
(10) Electrical specifications: 105- 125V AC, 50-60 cycles.
(11) Mechanical specifications: 12½" wide; 5½" deep; 11½" high.

OPERATION

Testing a tube is merely a simple series of steps.

NOTE: Do not plug tube into socket until all controls are set.

(1) TUBE NUMBER: Select the tube number under the heading marked "TUBE" on the roll chart.
(2) SHUNT: Adjust the SHUNT CONTROL on the panel to the number marked on the roll chart.
(3) FILAMENT: Set the FILAMENT switch to the same value as shown on the chart.*
(4) SELECTOR: Set the SELECTOR SWITCH as indicated on the roll chart.

The next two columns are for the 10 lever switches and refer to their "up" and "down" positions. UNLESS OTHERWISE INDICATED LEAVE ALL SWITCHES IN THEIR CENTER POSITION.

(5) UP: Move lever switches numbered on "up" column of roll chart to the "up" position.
(6) DOWN: Move lever switches numbered on "down" column of roll chart to the "down" position.
(7) Insert tube in proper socket and turn power on.
(8) LINE ADJUST: (a) Set SELECTOR switch to "Line Adj." position. (b) Adjust LINE ADJUST potentiometer until meter reads within a division of "Line."
(9) SHORT: Neon bulb will light after preceding step only if a short is present. Do not test a shorted tube any further as damage will result. (See SHORT TEST instructions which follow.)

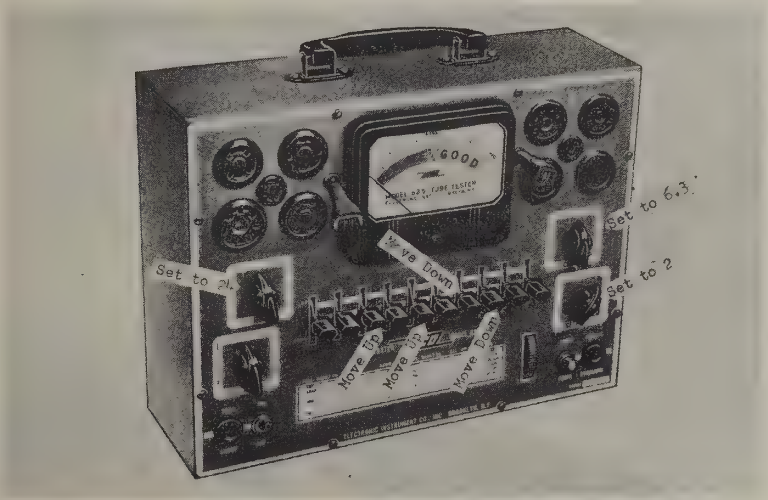
* Since the FILAMENT selector will apply any voltage selected to a tube under test, care should be taken to check this setting in order that no higher than rated voltage be applied. Disregarding this may cause burning out of the tube under test. This is true in all tube testers.

(10) MERIT SWITCH: Depressing this switch will indicate the condition of the tube.

Example. Testing a 6J5 tube:

Under the roll chart heading of 6J5, the following adjustments appear:

TUBE	SHUNT	FIL	SEL	UP	DOWN
6J5	24	6.3	2	3,5	7,8



If more than one listing is given on the roll chart (6SQ7, 6J6, etc.) it is because the tube under test is multipurpose. The procedure is to test the first row of figures, then reset and test the second, third, etc. If any test shows bad, the tube is defective.

GRID CAPS

The EICO Model 625K has been designed with two grid caps, a feature usually available only in more expensive equipment, since many tubes are so provided. Note: In all cases, except those tubes requiring 2 grid caps, the right side cap will be used. The right side grid cap is controlled by lever switch #10; the left side grid cap by lever switch #9.

OVERLOAD

The OVERLOAD bulb is an extremely important feature for a tube tester. It indicates transformer overload. In the event a tube with a shorted filament were inserted into a tube tester which does not have this feature, the transformer would tend to overheat and possibly burn out. In the EICO Model 625, a filament short will be indicated by the OVERLOAD bulb lighting. In this case the tube under test should immediately be removed.

Note: On occasion the bulb may light instantaneously when the AC plug is inserted. This is a case of surge and may be ignored.

SHORT

To test for tube element shorts, the 10 lever switches must be individually moved through their entire range and then returned to the position originally indicated on the roll chart. Please note that each switch has 3 positions, "down, center and up." Therefore, if a switch is in the center position it should be moved "up, then "down" stopping for an instant in each position and finally returned to the original position.

As a further example, if the switch were originally in the "down" position the lever would be thrown to the center, then to the "up" and back to its original "down" position. If the neon "SHORT" indicator lights in any position the tube has leakage or is shorted. DO NOT MOVE LEVERS IN BOLD TYPE.

and numbered lever switches that connect to

EICO 625
TUBE TESTER